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STATE BOARD OF HEALTH OF FLORIDA

TWENTY-SIXTH
ANNUAL REPORT

OF THE

State Board of Health
of Florida
1914

APPROVED BY THE BOARD IN ANNUAL
SESSION, MARCH 16, 1915

JACKSONVILLE, FLORIDA

Compliments of

Joseph G. Porter.

State Health Officer of Florida

Form 103

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PUBLICATION 134

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JACKSONVILLE, FLORIDA

THE DREW PRESS
JACKSONVILLE
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1915

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LETTER OF TRANSMITTAL

Palatka, Fla., March 16, 1915.

HON. PARK TRAMMELL,

Governor of the State of Florida, Tallahassee, Fla.

DEAR SIR:—I take pleasure in handing you the annual report of the State Health Officer for the year 1914, which embraces a recital of the activities of the Board during the year as well as a detailed statement of the expenditures in the maintenance of health management and health protection of the people of Florida.

I am exceedingly happy to be able to say to you that the general health of the State for the year 1914 has been remarkably good.

From the four largest cities of the State, three of which are in the registration area for deaths, of the U. S. Bureau of the Census, the record shows a combined crude death rate during the past year of 17.5 per one thousand population, of which the white rate was 14.5 and the colored 22.1. Eliminating deaths of reported non-residents (those of less than six months residence at place of death) the combined rates are: For white residents 12.3, colored residents, 20.6, all residents 15.6. The estimated population of these four cities is 165,691.

A large proportion of the State Health Officer's report is devoted to preventable diseases, their causes and their hindrance, and his arguments as to why the people of the State should not take advantage of the measures which science in its progressive advance has clearly demonstrated to be useful agents in keeping well, and in warding off many illnesses which heretofore have been thought to be necessary to run a specified course, are tersely and concisely put forth.

I heartily concur in the opinion expressed by the State Health Officer in his conclusions in regard to this subject.

I trust that you may find it convenient to give your attention to what he has said thereon, and will make mention in an approving way of the salient points of the report in your next message to the Legislature.

Introduction

General health of the State.

Death rate for four largest cities of State.

Referring to the State Health Officer's report concerning preventable diseases.

Efforts of the State Board of Health to educate the people in disease prevention.

It is to be regretted that indifference to the subject of preventable disease and the remedies which have been brought forth of late to interrupt such illnesses as well as to adopt measures to prevent the same should not have been more closely heeded by the people of the State. If followed the people would have enjoyed health and been better off financially. Certainly the State Board of Health has made persistent endeavor in this direction to educate those who could read, by pamphlets, press articles, and monthly publications, so that it would seem that there cannot be any reasonable excuse for any adult in the State not being thoroughly informed on the proper remedial preventives against the four principal preventable diseases: smallpox, typhoid fever, diphtheria and malaria.

Estimated cost of preventable disease.

The State Health Officer gives an estimate of ten thousand dollars which it has cost to care for the indigent smallpox patients alone. The taxpayers of the State should not have had to spend this amount if vaccination had been accepted and practiced and it seems unjust to those who heed advice and take advantage of counsel in this respect, to be compelled to bear the burden for the neglect, indifference or perverse opposition by those who refuse to protect themselves by this simple means. It has been estimated that it has cost the State at least \$75,000 to care for all the preventable diseases occurring during the past year in investigating source, determining the character of special ailments, and in a hundred other ways connected with the management, have the taxpayers of the State been called upon to defray an expense due entirely to disregard, ignorance or perverse opposition.

Taxpayers of the State called upon to defray expense of preventable disease.

Abolishing quarantine.

I am in favor of abolishing all civic or domestic quarantine measures in regard to smallpox and in fact, I believe that the term "isolation" or "segregation" would be the better one to apply to other contagious disorders. I am convinced, as the State Health Officer says, that when the State furnishes an insurance to its people free of cost, by vaccination against smallpox, and the people refuse, then those who are bearing the penalty of their neglect or refusal to accept this gift of the State, should be required to defray all expenses connected with

their sickness. A warning card to the public that smallpox exists on the premises and that unvaccinated persons should "keep out," is all I think should be necessary to inform, caution and protect the public. Neither am I forgetting that there is a class of indigents living from hand to mouth, who, if attacked with this sickness, must be looked after. But I am also of the opinion that to remedy this, vaccination among this class should be made compulsory by the State. I would go a step further and insist by legislative action, that large bodies of men should not be permitted to be brought into or employed in the various industrial plants of the State unless they are individually, successfully vaccinated, or unless the employers agree to defray all expenses attendant upon the occurrence of cases of smallpox in their camps.

Vaccination made compulsory by the State under certain conditions.

Several years ago the Board of County Commissioners in Dade, Duval, Escambia and Hillsborough donated tracts of land to the State Board of Health with the specific understanding that the Board would erect thereon isolation hospitals for the care of smallpox cases. There was a further understanding in the covenant between the State Board of Health and the County Commissioners that when the land ceased to be operated for the purpose set forth in the instrument of conveyance, then the land would revert, with the appurtenances thereof, to the several counties making the donation. It is a matter, I think seriously to be considered, whether it would not be better business management and as emphasizing the policy of the Board in its main reliance against smallpox by vaccination to cease to operate these hospitals and to permit the land to revert to the several counties who generously donated it in the past, when hospital management was thought to be the only means of controlling smallpox; not treating the disease, but controlling it. The buildings which were erected some years ago are now in much need of repairs and in one or two instances are not adequate for any large demand which might be made upon these institutions. They should be either rebuilt, repaired or pulled down, or the property allowed to lapse to its former owner. Moreover the location of these anti-vaccination homes for the indigently perverse cases of smallpox, are rapidly becoming closer and closer to

The isolation hospitals, of Dade, Duval and Escambia.

Abandoning the isolation hospitals.

settled portions of communities and contiguous to large populated centers as for instance: Jacksonville in Duval County and Miami in Dade County. The hospital sites butt onto suburbs of Jacksonville and Miami, which are rapidly being built up and it will not be very many years before the County Commissioners on complaint of citizens will demand their removal and the State Board of Health will be asked to either vacate or abandon the property. I think, therefore, it would be a wise proposition as a measure of economy as well as of common sense to think over the question whether any more money should be expended on these buildings, either in repair or in new structures.

The recommendations of the State Health Officer all meet with my approval. I especially wish to urge upon you the benefit to the State in economy and to the Board in efficiency and speedy management which would result from legislative permission to grant authority to the transportation companies operating in Florida to issue passes to the employees of the State Board of Health. The reason that the State Health Officer gives for requesting this permission is convincing and seems to me to be unanswerable. So, also do I approve of the recommendations in regard to amending the law relating to the free distribution of hog cholera serum. The protection of the swine industry of the State is a commercial proposition entirely and one of dollars and cents to the producer, and does not in any way affect the life or health of human beings. It is as much a commercial measure as the question of eradicating the citrus canker would be to the citrus fruit growers, and I do not think that the taxpayers of the State as a whole should be asked to donate \$20,000.00 to \$30,000.00 a year, which is one-third of the present income of the State Board of Health, to enhance the value of an industry that is so clearly a commercial and class consideration, to the manifest impairment of a fund designed for the protection of human life.

Too much stress cannot be laid upon the recommendation of the State Health Officer that the forthcoming legislature should enact measures looking to a better sanitary supervision of the public schools of the State, especially in the rural districts. So too, do I advise that the present law which looks to the protection of the citizens from insect-borne diseases by

Recommendations
of the State Health
Officer.

Passes for
employees of
State Board of
Health.

The law
concerning
distribution of
free hog cholera
serum.

Recommendations
of State Health
Officer concerning
public schools of
the State, and
screening of all
places where food
is served.

well screened kitchens, dining rooms, and "passageways leading thereto," be amended to include all other places in the State where food or drink is served the traveling public, and which may be contaminated by flies. The reasons given by the State Health Officer are so clearly expressed that it is unnecessary, I think, to enter into any extended argument on the same.

Most particularly I endorse the recommendation that the present vital statistics laws be remade into one comprehensive measure to insure the accurate collection and greatest usefulness of data on all the life history of the people of the State, and that these be properly and safely preserved as individual records of those most concerned, as well as for the benefit of the whole people to prove to the world that Florida is healthful; and to help guard against any lowering of that healthfulness.

Recommendations
concerning vital
statistics.

At the legislative session of 1911, a bill was passed directing the State Board of Health to erect and maintain a hospital for crippled indigent children of the State and equip the same. Twenty thousand dollars was provided for the purchase of grounds, erection of buildings and all necessary equipment, and ten thousand dollars a year for two years was mentioned as a sum necessary for maintenance. Doubtless you are familiar with the history of this measure. It was a pet project of Governor Gilchrist who then occupied the Executive Chair of the State, and a worthy impulse prompted, I have no doubt, the proposition. He had seen, as I suppose you have, many times when traveling about the State, a number of children who were deformed in limb either through inheritance or by accident, and who from reason of poverty or straitened financial circumstances of parents, had never been able to have their deformity corrected, and who, as age progressed and their natural supporters passed to the Beyond, would, unrelieved, inevitably become a charge upon charity of communities or of the Commonwealth. To have these children not become wards of the State, Governor Gilchrist proposed the measure, which was worthy of a great and generous Commonwealth. But the bill was "turned down" in the Senate because of the appropriation which it carried. At this juncture the Governor called to his assistance the State Health Officer and accepted a

Crippled indigent
children's hospital.

suggestion in the nature of a provision, "That until the number of indigent crippled children, citizens of the State of Florida, shall be sufficient in number to warrant the State Board of Health to erect and maintain an institution of this character and nature, that the State Board of Health is authorized to arrange with any sanitarium or hospital in Florida to care for and treat the indigent crippled and deformed children of the State and to pay for such treatment out of the funds of the State Board of Health not in excess of the amount appropriated by this Act." This Proviso met with favorable response from those in the legislature who had originally opposed the measure and the bill passed. Accordingly the State Health Officer has arranged with St. Luke's Hospital at Jacksonville for the care of the white children and with the Brewster hospital in the same city for the treatment of the colored children, who are afflicted or deformed. Dr. Raymond C. Turck of Jacksonville, a surgeon of orthopedic ability has heretofore taken charge of these cases—both white and colored—and has operated and relieved those whose condition was such that an operation would benefit at no charge to the State for his services. The Board has seen fit to give Dr. Turck each year an honorarium as a slight token of appreciation of his generous donation of time and professional ability. This is in no wise commensurate with the service given. Dr. Turck, until this year, has not asked for compensation, but in a recent letter to the Executive office he states that this work takes up a great deal of his time, and he asks to be put on the professional staff of the Executive Officer with adequate annual compensation. The increasing number of cases each year, seem now to warrant the Board in carrying out the terms of the Act by constructing and maintaining a special building for this purpose. Therefore I approve of the recommendation of the State Health Officer that a building be constructed, equipped and maintained in conformity with the provisions of the Act, for the care and relief of the indigent crippled children in the State, as soon as funds are available in the treasury of the Board for this purpose.

While the aggregate of expenditures during the year, as itemized in the State Health Officer's statement, is apparently

Recommending a
special building.

Receipts and
Expenditures.

large, yet it should not be forgotten that the demands on the Board's treasury imposed by legislative enactments from time to time, have likewise been heavy and exacting. Every voucher is audited three times before it is paid. The Auditor of the Board closely scrutinizes every item of the bill for authority, before preparing the voucher. It then is placed before the State Health Officer for his inspection and certification that the "charges are just, equitable and according to law." The voucher must then have my approval, and finally that of the Comptroller of the State, who if he thinks it is irregular or extravagant can "turn down" if he wishes any schedule of expenditures sent him. The order in which these audits are made is mentioned to show the exact course which every cent of the State's money pertaining to the State Board of Health funds, must take before it is spent. In this connection I wish to invite your attention to a marked inconsistency in the present Statutes in regard to the discharge of the State's obligations when incurred by the State Board of Health.

Under the law, the State Health Officer is made the disbursing officer of the Board, and he is placed under a ten-thousand-dollar bond for the faithful and honest performance of this duty, yet, he never has a cent of the State Board's funds put in his possession or under his control until the contracted debts are filed with the Comptroller. In other words every creditor of the State Board of Health is expected and required to receipt for the amount of his bill before any money is forthcoming, and is compelled to wait for a remittance to the State Health Officer from either the State Treasurer or from the Comptroller before he is paid. It occurs to me that the Legislature should either authorize a transfer of funds from the State Treasurer to the State Health Officer, for the use of the Board, on a regular, approved by the President of the State Board of Health, requisition, equal in amount to his bond, or else release the State Health Officer from the obligation of a bond. As the method now prevails, the State Health Officer in order to conduct the affairs of his office in payment of petty accounts, which business men usually class "petty cash," has to advance various sums each month to meet express charges, postage, drayage and such like small amounts, but which at

Method of paying
bills and handling
funds of the Board

the end of the month and until a reimbursement can be made, oftentimes amount to a respectable sum. For many years after the organization of the Board in 1889, the plan of transfer of sums not to exceed the amount of the State Health Officer's bond, on requisitions approved by the President of the Board, was followed, but under a subsequent administration was changed to the present method. At first, under the present ruling the amount authorized by the statute which the State Health Officer could make requisition for, was largely in excess of the amount monthly expended, and the excess was turned back into the general fund of the State Board of Health held by the State Treasurer. Even then there was no excess balance allowed for current expenses. At the present time this amount is not sufficient to pay the current monthly expenses of salaries alone, so I think that the Legislature should provide some relief, by amending the present law or enacting a new statute, in order that funds may always be available for emergency use when required.

There are many other interesting features of the State Health Officer's report, to which I might call your attention and discuss, but to do so in a letter of transmittal of this kind, would take up too much of your time, and I therefore ask that you give a careful reading and consideration to the entire report of the State Health Officer.

Very respectfully,

F. J. FEARNSIDE,
President State Board of Health.

EXECUTIVE DEPARTMENT

REPORT OF THE
STATE HEALTH OFFICER,
DR. JOSEPH Y. PORTER.

REPORT OF THE STATE HEALTH OFFICER

To the President of the State Board of Health of Florida:

Herewith is transmitted to you for your consideration and disposal the report for 1914 of the State Health Officer, who, according to precedent as Executive Officer and Secretary of the State Board of Health is expected to make a yearly report of the transactions of his office in order that the President of the Board after consultation with his colleagues may, according to the language of the Statutes:

Introduction.

"Make an annual report to the Governor of all expenditures, in a clear and concise statement, together with any special observations, and recommendations of facts that may be conducive to the health and sanitary condition of the State,
* * * * *

The report of the Executive Officer of the Board for this year except in one or two instances, almost exclusively deals with business matters and such questions as may affect administration, with the hope and expectation, that what is told might appeal to, and attract the thoughtful consideration of the Legislature at their biennial gathering in April. Discussions of scientific methods in preventive medicine, and the progress attained in this direction has been and will continue to be found from time to time in the monthly publication of the Board, the HEALTH NOTES, and in the weekly press service. Experience in writing reports which are mainly intended for the eye of the average Legislator or business man, has taught that attention is more likely to be gained by short and concise statements of what has been accomplished and what is recommended for future improvement, than a lengthy argument blended with instances and facts which, however interesting to a sanitist or a student inquiring into special subjects is apt to be considered dry reading by all others. Therefore the following statements from the different divisions of the Health Department comprise in a detailed manner what has happened in each during the current year. It is hoped that what has been attempted for the bettering of the health of the people of

Florida by the Executive Officer, may meet with the approval of the Board and that the recommendations for further improvement may be accepted and concurred in.

At the end of the year all of the 29 cities of the State of 2,000 and over, by the Census of 1910 are actively collecting records of births and deaths and nearly a third of the 50 odd cities between 500 and 2,000 have passed the ordinance recommended by this office and have started the work and over a dozen of the smaller municipalities have taken the same steps. Many of the other communities are interested and expecting to pass the necessary legislation soon, and some even of the counties desire to have rural as well as urban registration if some plan can be formulated to allow this to be done.

This community interest and desire to preserve the individual records of citizens and to show the true health conditions of each locality is greatly to be commended and is a long step towards the passage by the legislature of the Model Law now in force generally throughout the registration area of this country and which has in the past year been passed in Georgia and South Carolina.

Florida cannot afford to be outstripped by any other State in the South in this necessary index of her known but unproved healthfulness, for there is no other State in the Union which is more dependent upon an increasing influx of visitors and settlers nor is there any state which offers them so great opportunities. But the experience of the past year has shown the need of unifying and correlating the work of collections in the various communities, some of whose ordinances vary, and especially of the importance of a central control, rather than the control by the authorities in each municipality. Consequently it is strongly recommended that an appeal be made to the next legislature to pass the Model Law for the collection of Vital Statistics in the most suitable form to suit conditions in this State. Such a law would supplement local legislation now in force and become effective where interest was slight and ordinances unenforced and would eventually give all communities reliable records.

Explanation of
the method and
plan of the report.

In explanation of this arrangement of work and recital of events, it may be stated that the plan has been followed for the past two years because it was desired in the first place to show a due appreciation of the efforts of the sections, and secondly to have the several divisions tell in their own language what has been accomplished during the year, the successes met with as well as disappointments and difficulties incurred, and for each to suggest means for the future improvement of their institution. A careful reading of these reports as made to the Executive Officer cannot fail to give a very clear and comprehensive idea of the extent and nature of the labor performed by the different divisions, and which, when considered collectively, make up the work of the State Board of Health of Florida for the year 1914.

The general health
of the State.

The general health of the State for the past year has been exceedingly good; it might almost be said to have been "excellent" were it not that the word "excellent" might unintentionally mislead the reader, by suggesting that there had been an absolute absence of all ills which might or do affect mankind; a condition which can never be attained until the human race shall have reached a state of ideal physical perfection. It can be authoritatively stated, however, that preventable diseases have been less in frequency during 1914 than in previous years, except possibly in typhoid fever and that there has been an increasing development and interest in sanitary activities on the part of the people, as is likewise shown by a steadily decreasing morbidity. It is to be regretted that a broad statement of this character cannot be supported by figures and well worked out statistics, but as yet the Vital Statistics of Florida have not been so tabulated that a positiveness can be shown by tables and other collected data. A plan to procure this most necessary information is being attempted by the Executive Office, and has been in progress of acquiring for the past year. The movement, however, has been slow, not from a lack of honest trial on the part of the executive office to stimulate public opinion and individual interest, but because those who should be most concerned could not be made to see the great importance which well collected vital statistics would be to communities singly and to the whole state, collectively. The

The attempt to
procure vital
statistics for
Florida.

Statistician of the Board tells in his report how far he has gone in an effort to obtain information relative to mortality statistics and the expectation for final accomplishing of this most desired end. Unless tabulated vital statistics are accurate or within ninety per cent of accuracy, a limited information of this kind is worthless in studying the causes of sickness and for working out methods to lessen the occurrence of disease and lengthen the life of man. The value of vital statistics in health work and general sanitary management is of incalculable importance and those engaged in an effort to "keep people well" realize this more than the average citizen, to whom vital statistics present only an array of figures, and to the general run of readers figures are always mystifying and uninteresting. Educational measures along the line of improvement of the human race are usually gradual and cannot be hastened faster than the mental development of a people will accept and admit.

Value of accurate
vital statistics.

The importance of a subject has to be gone over and over, and then some more, before facts are accepted and advice followed. This hesitance to agree to propositions which acknowledged teachers in certain callings are insisting upon comes not so much from a spirit of antagonism as from a mental lethargy and indifference—a "show me" disposition—in order to be convinced. Once convinced, the battle for health and health allies is won, especially when it can be shown that commercially the gain is one where dollars and cents counts equally or if not more with comfort and contentment. Unfortunately this unconcernedness about things pertaining to healthful living applies with equal force and argument to the general subject of personal hygiene and sanitation as it does to any particular branch thereof, and it is only by persistent and insistent pleading, coaxing and arguing and more particularly and especially through educational means in public teaching, it can attain to even a fair degree of acceptance of worked out truths and means and measures directed against preventable diseases. Health is the greatest asset commercially as well as for household happiness—domestically—that a community, state or nation can possess. The community which has the lowest death rate or in which sickness is so diminished that it is an almost negligible factor, is one that is prosperous in business,

Indifference to
teachings on
matters concerning
health and
sanitation.

progressive in civic development and happy in domestic life, for disease brings want and poverty and sickness entails suffering with all its attendant misery.

The efforts of the Executive Officer have been directed for past years in an educational campaign to the value of general and individual hygiene. Individual responsibility in health matters has been urged upon the people in press bulletins and in other writings from the Executive Office so often that the expression has become the "slogan of the Board." As the constant dropping of water will wear away flinty surfaces in time, so it is hoped that the constant and insistent urging which the Executive Officer is pressing upon the attention of the people of Florida in a general conception of personal responsibility in the manner of healthful living, may wear away that indifference and apathy which too often comes and is allowed to exist, in the absence of a general prevalence of some contagious disorder. The pendulum of alertness often swings then too far in the opposite direction, when fear takes the place of reason, and "a wanting to do too much of an unnecessary character" supersedes rational action.

If the Executive Officer of the Board can convince each citizen of the State that he or she should constitute himself or herself the sanitary guardian and watchful warden of his or her own household, to see that the tenets of hygiene and sanitary science are strictly followed in the care and management of all that comes under their supervision and control, the general tone of the State's health will not only be vastly improved, but will be more than improved, will soon be raised to the highest anticipation of possible perfection. Reference has been made to the means adopted to convey this information and the extent of exact knowledge of which, practical sanitarians possess on the subject. People must be taught that indifference to Nature's requirements and an open violation of the laws of health will assuredly meet with punishment. Uncleanly habits and immoral practices which jeopardize health—and all immorality tends to destruction of the natural vital force of resistance to disease—will undoubtedly pay the penalty of disregard, "even unto the third and fourth generation." This is Nature's law, and all natural laws, that is to

Individual
responsibility.

Wanting to do too
much in times of
epidemic.

say, those which pertain to human conduct in health or morals are inexorable and unrelenting in their operation. Experience has taught the Executive Officer that people learn quicker and remember longer that which is seen—that which is taught through the eye—than what is told them by speech. The mind seems to receive a more lasting impression by sight than by words, and the picture thrown on the screen whether instructive or merely amusing is remembered longer, than a verbal description would be, and while there has been an honest endeavor to interest the reading public of the State in sanitary subjects, by short terse articles on hygienic and allied topics through the HEALTH NOTES and in weekly press bulletins, and it is believed that the attempt at public instruction in this direction is appreciated, yet it is felt that there is still something lacking to round up or complete a system of instruction in sanitary schooling which will reach those who read indifferently and who usually skip over articles of advice about health, because they think that they are "too deep" for them to understand or are lacking in sensational interest. Perhaps this is true. If so, it then becomes the duty of those who are charged with educating the public along health lines to adopt other methods to reach an inattentive ear or a sluggish brain. Appreciating the difficulties which lie in the way of verbal or written instruction in educational measures of this nature, it has been thought that the cause can be better served by placing before the people plans, models and pictures illustrating the several methods by which health is conserved and improved. An attempt of this kind was tried out at the meeting of the American Public Health Association in December of last year in Jacksonville. The results justify the Executive Officer in enlarging the scope of informing the people in this direction by adding to the "exhibit" many suggestive hints to healthful living and to place the same "on the road" under the control and direction of one of his Assistants and Sociological Workers, that the people everywhere in the State may receive useful instruction in methods and ways which experience and study has taught to be of practical advantage in upbuilding the health of the home and community. Therefore commencing the early part of this month—February—

Teaching through
the eye rather than
by the ear.

The State Board of
Health's Exhibit.

the State Board of Health's "Educational Health Exhibit" will be a prominent feature in teaching the principles and fundamental doctrine of preventive medicine.

The Health Train of The Louisiana State Board of Health.

The plan for community education in health matters adopted by Dr. Oscar Dowling the distinguished Health Officer of Louisiana, by which he instructs the different sections of his State through the agency of a health train equipped with all needful means to demonstrate the subjects taught and the lessons to be learned in personal and civic hygiene, is an ideal one for popular teaching of the public in this direction, and one which can be made effective through the State anywhere that a rail line is operated or a side track exists. His health train consists of three Pullman cars converted into exhibit rooms, two for the purpose of demonstration and one for living quarters for the attaches of the Doctor's office who are necessary to operate and assist him in his lectures. The Railroad Commission of Louisiana allows the roads in the State to haul this health train anywhere, and in fact the Interstate Commerce Commission of the United States has given permission as an educational measure, for any railroad in the United States to extend this courtesy if they wish to do so. Realizing the importance of health instruction it is not known that any railroad has ever refused Doctor Dowling's request for free transportation of his exhibits. If the Legislature of Florida would give its sanction to the State Board of Health to expend some of the health funds in an educational measure of this kind, or make a special appropriation for the purpose, it is felt that a very noticeable improvement in the health and personal hygiene in the rural districts of the State would soon be noticed.

Referring to the Legislature of Florida giving sanction for the State Board of Health to expend funds for health train.

In the absence of exact and trustworthy information as regards the nature and extent of preventable diseases in the State during the past year, and which, if vital statistical data which could be depended upon, had been obtainable, which the Board should have had—recourse must be made to the reports of the different bacteriological laboratories to learn the number and character of the specimens and cultures which have been sent to them for examination and determination.

These reports furnish probably the best index of the number and varied grouping of diseases of a preventable nature which under existing conditions can be obtained. It must be remembered, however, that the accompanying tables only show approximately the cases and their number which have been reported for it is unlikely that medical attendants have sought from the laboratories information for all complex troubles coming under their care or that each fever patient or one affected with obscure throat symptoms has been reported to either the local representative of the State Board of Health or to the Executive Office.

Reports of preventable diseases obtained from the laboratories of the Board.

In his report the Senior Bacteriologist, commenting upon the prevalence of some of the "preventable diseases"—information concerning which he has gathered from the reports of the other laboratories—expresses the belief that in general there has been a lesser occurrence of these disorders in 1914 than in 1913. Typhoid fever was the only disease showing a larger number of specimens received and a higher percentage of positive examinations. This may be more apparent than real, because it is thought that physicians have made more use of the laboratories during the past year than in previous years, a fact which Dr. Hanson comments upon also. So it is just barely possible that the seeming increase of number of specimens and their positiveness in typhoid has been altogether due to a more frequent recourse to expert determination of the character of the sickness, which a laboratory examination gives, than to a greater degree of prevalence of this disorder. A dependable morbidity report each week from the physicians of the State—not of the names of the patients, but only the number of certain illnesses coming under their observation and treatment—would soon settle the question, which the Executive Officer has always contended for, that Florida has a low morbidity rate as well as a low mortality rate per thousand of population, but he has never been able to prove the contention by figures, for they were lacking.

Referring to the prevalence of preventable diseases as shown by laboratory reports.

Morbidity reports each week would settle the question of a low morbidity rate for Florida.

Some of the diseases classed under the heading of preventable disorders are oftentimes so obscure in symptoms as to be unrecognizable even to those who have had extended experience in treating them. For instance: Smallpox of late years

Preventable diseases being sometimes so mild as not to be recognized.

has been so exceedingly mild, causing so little constitutional disturbance, that the true nature of the contagion has been overlooked and not appreciated until perhaps a more violent disturbance has called particular attention to the viciousness of the eruption with more emphatic clinical manifestations. This reasoning is applicable to malaria and typhoid fever, except however, that a differentiation is more easily obtained between these two diseases if the microscope is used, or when, if that instrument of precision and diagnosis is not available, a prompt reference is made to one of the laboratories of the Board. It can be understood, therefore, that, with the element of doubtful diagnosis, and mistaken clinical interpretation, it is not an easy matter to be able to state the exact number of preventable diseases occurring in any one year, but it is believed that the morbidity rate as well as the mortality rate in Florida for 1914 has been greatly lowered over previous years. The statistics of mortality which the Board has been enabled to obtain from the cities having a population of 2,000 and over, where reports have been received fully within ninety per cent of accuracy, seem to fully attest the correctness of this belief, and would tend to the further feeling of certainty that all manner of sickness which most generally precedes mortality, has also been materially cut down in extent of prevalence.

From the four largest cities in the State having an aggregate population of 165,691, of which 101,186 are white and 64,505 colored, it is found that the mortality rate for 1914 was 17.5 per thousand of population; 14.5 for whites and 22.1 for colored, and excluding non-residents the rate was 15.6, for white residents 12.3, and for colored 20.6; all other than whites are included in the colored enumeration.

But with the knowledge which is so widespread, in regard to preventive measures against special diseases, the question can well be asked, "Why should people have smallpox, typhoid fever, malaria, or diphtheria? Why should not the measures which science in its multiform teaching asserts to be preventive, be accepted, and why should sickness with loss of working ability, which means loss in money, and all the attendant expenses, worry, anxiety and discomfort, be preferred to

Showing the mortality rate for 1914.

Why not accept the measures which science advocates for preventing disease.

health, vigor and mental activity and alertness, the possession of which allows the individuals to enjoy the pleasurable things of life? Can any sensible person give a reasonable objection to accepting and adopting propositions for keeping well and avoiding the sick bed? Yet the appalling statement is made by statistics that over half a million of human beings die each year from preventable disease; a sad commentary upon the boasted intelligence of the twentieth century. Is not sympathy wasted on a person who contracts smallpox or allows a member of his family to be infected? Rather should not such a perverse individual, after his physical punishment, be punished by law for being a common nuisance, a stigma on intelligence and a possible charge and a money imposition on the public which his more provident neighbor must help to bear? It would be a righteous and even-minded act for the law-making power of the State to declare that a failure to be protected against smallpox is a misdemeanor on the part of a citizen, punishable when so reported, and further because the disease is preventable, that every one having smallpox should be required to defray all expenses consequent upon such sickness. Where large numbers of persons are employed in construction work or in industrial plants, the employer should be made responsible for all charges and bills of attendance, isolation and maintenance of cases of smallpox occurring in their camps, plants of construction work, of railroad building, phosphate mining or other industrial institutions. It has been frequently said, but the remark is worth repeating, "A man would be considered either an idiot or a fool if he should refuse an insurance against fire for his home free of any cost to himself." How many men when a property consideration is concerned and a commercial aspect is placed upon an offer of this kind, would refuse? Yet daily the State is offering free insurance against smallpox by vaccination; an insurance not only against a sickness which is loathsome to the individual himself and repulsive to family and friends, but an insurance against disfigurement and perhaps death itself, and this offer is rejected. When it is stated that there were 583 cases of smallpox in the State of Florida in 1914 officially reported to the State Board of Health and that these cases of preventable disease cost the taxpayers

The failure to be protected against smallpox a misdemeanor.

Any one contracting smallpox to defray all the expenses.

Employers should be held responsible where a large number of men are employed.

Referring to the
prejudice of some
people against
vaccination.

of the State over \$10,000.00, is it a wonder that health authorities cease to have patience and forbearance when dealing with prejudiced individuals, who to maintain a foolish and unproven contention against vaccination will endanger not only their own lives but will sacrifice the lives of innocent and helpless beings, the children under their charge? These individuals could well be adjudged of unsound mind, for any human being so mentally defective as not to be amenable to reason in matters so vitally important as those affecting health are a menace to any community by reason of a mental deficiency and should be adjudged criminally responsible for his or her acts; as much so as for seditious talk, or inciting a riot. A burglar takes in money value what in time may be replaced. He is a criminal nevertheless. Those who oppose preventive measures against smallpox, typhoid fever and diphtheria are in the opinion of the writer, criminals of the same class as the midnight assassin or murderer. The only difference is one of degree and in favor of the assassin, for the victim may have an opportunity to defend his life, or escape, while in the other case, innocent children are made to pay the penalty of vicious perversity. Too strong language cannot be used in condemnation of those who not only actively oppose preventive measures for "keeping well" but likewise those who manifest an indifference to the subject and who while acknowledging the teachings of the State Board of Health as being correct, yet fail to practice what they believe and are convinced of. When citizens of the susceptible age to typhoid fever, between ten and fifty years can be protected for less than one dollar, and when statistics show that about only one person in one hundred thousand, when protected contracts typhoid fever, and when further statistics show that every case of typhoid fever is an expense to some one of about five hundred dollars, is it not surprising that aside from the "sick-bed" consideration, that prevention does not appeal more strongly to every one who is susceptible if only from purely a commercial standpoint? The same potent argument may be used for all other of the preventable disorders. Health means ability to work. Work means a capableness to accumulate and acquire a comfortable competency which means comfort and ease. It is only the stupid person who

Prevention
of disease.

fails to see the advantages which prevention against disease will bring to him. The Executive Officer trusts that the Board will pardon the show of strong feeling on this subject of "Prevention" against disease which has been indulged in, and with which so much space in discussing the health affairs of the State during the past year has been taken up. He feels however, that like strong remedies which sometimes are needed to cure, strong and forcible language is required to awaken the people to their own danger from a procrastinating indifference in which a vast number have fallen. They need to be aroused from a lethargy in which they are unconsciously slumbering. It is the inherent right of every human to protect his life. "Self preservation is the first law of Nature" reads with as equal significance and force today as it did when placed as a text at the top of a page of the old copy-writing book. There seems to be a crazed desire by a large number of men to carry a gun; for what? "To protect my life," is the answer. And the occasion to use such a means of defending life does not occur one one-thousandth times as often, as such an individual meets up with from possible infection of typhoid fever when traveling, or when visiting soft drink stands or eating in or at unscreened dining rooms and lunch counters. This man "with a gun" is willing to risk arrest, a fine, and perhaps imprisonment for disobeying a statute of the State, which will cost him money, besides deprive him of personal liberty, but hesitates and is willing to take "a chance" against typhoid fever although there is but little if any personal discomfort and he can obtain the protection for less than a dollar. Tons of literature have been written on this subject and tons of argument could still be printed. What the law-makers of Florida might seriously and advantageously consider is the commercial side of protection of the citizens of the State against smallpox involving loss of time, which likewise means loss in revenue, and more than all else imposing a burden in an equal manner on the taxpayers, who are called upon to sustain this expense because of a misguided and mistaken idea of "individual right" which is thought to be granted to the prejudiced and mulish, to do as they please, irrespective of the welfare of others.

The commercial
side of protecting
the citizens of
Florida against
smallpox.

The following table compares the occurrence of those preventable diseases which the Board has gained information of during the past year with those occurring in 1913. The comparison is favorable and shows a pleasing improvement.

Year	Small-pox	Typhoid Fever	Malaria	Tuberculosis	Diphtheria	Rabies. Pasteur Treatment
1913	1,166	566	506	777	739	107
1914	583	960	277	746	707	89

It is impossible to make any precise statement of the money loss to the State which the occurrence of preventable sickness has occasioned during the past year. Information of this character would be interesting if it could be had, but because of a lack of data and reported cases no estimate can be made. Even an approximate estimate would be merely guess work for many mild cases have been unrecognized, and this is particularly true as regards smallpox, and oftentimes through indifference and carelessness the nature of fever cases is overlooked. However as it has been the principal duty of the Assistants to the State Health Office to ferret out, investigate and trace the source of infection in the preventable maladies to which the attention of the Executive Officer has been called, it would seem perfectly fair that all expenses attending such investigation should be charged against these disorders, and therefore with the expense of the laboratories, whose operations have mainly been directed to determining and ascertaining the nature of specimens for supposedly preventable sickness it can be stated within the limit of conservative estimate that the preventable disorders, which should never have occurred, have cost the Commonwealth of Florida in money loss alone in the neighborhood of \$75,000.00.

Much space has been taken up in discussing prevention of disease as of primary importance in health management. The subject of "Economic Value of Disease Prevention" was gone into in a late "Press Service Bulletin" and need not be repeated but it is believed that when a due appreciation is felt by the people of the importance of this subject, then will morbidity be decreased in the State and mortality likewise. The advance made of late years in the discovery of vaccine and serums by the use of which many illnesses can be avoided has enabled the medical man to cut short attacks of sickness and in many

Cost of preventable disease.

The use of serums and vaccines.

instances prevent their occurrence. Vaccines made from the dead cultures of the specific organisms of the individual suffering therefrom—known as autogenous vaccines—are now used in warding off attacks of numerous disorders, not fatal but annoying, that formerly were thought to have to run a specified course. The protection as well as cure afforded the child by early administration of diphtheria antitoxin with an immunization protection given to members of the same family, the prophylaxis that is the safeguarding of the individual when bitten by a mad dog, by the Pasteur serum; the anticipation of the action and preventing the same, of the tetanus germ, in wounds by the anti-tetanic serum; the vaccination against typhoid so well known; the inhibitive energy of quinine when contesting with the malarial parasite, are all sheltering arms which science has given to guard the human race against misery and sickness. The first duty of a State Health management is to advise and recommend to the people measures which will protect life, and secondly to urge the adoption of agencies which will improve health and suppress sickness. Therefore in discussing these subjects and presenting arguments for the same, the Executive Officer feels that he is but following a duty expected of him by the people of Florida.

The duties of a State Health management.

As was remarked at the commencement of this narrative, the happenings of the several divisions of State Health work are told in separate reports submitted by each to the Executive Officer of the Board and interesting accounts of the character of labor performed is given therein. Except in a few instances no comment need be made by the Executive Officer unless it be to commend the efforts of the chiefs of the different sections and to express his thanks for the diligence which they have exercised in the trusts committed to them. There are, however, one or two matters connected with the Veterinary Department of the Board and to laboratory and other management to which it is desired to call your special attention.

First, the free distribution of hog cholera serum to the farmers of the State, and the annoying features of free distribution, of the statute which was passed at the session of 1911. It is not thought that the Legislature when passing this bill contemplated what an enormous expense they were fastening

Free Distribution of hog cholera serum to the farmers.

upon the State nor what a drain upon the State Board of Health's financial resources it was imposing. It is further believed that the intention of the Legislature was—whether so expressed or not—that only a moderate sum should be expended by the State Board of Health under strict supervision of the Veterinarian of the Board to demonstrate the usefulness of the serum as a preventive of hog cholera and that if found successful, then the farmers to purchase the product, which would be a reasonable proposition, involving a commercial aspect. It is not believed that it was ever contemplated by the Legislature which enacted the law that one-third of the State Board of Health's income should be expended in caring for the health of a swine industry, the protection of which through preventive measures was to enrich the producer or benefit the exploiter.

The Attorney General of the State expresses this opinion in almost the same tone, as his letter shows:

Tallahassee, Fla., September 25, 1914.

MY DEAR SIR:—Yours of the 16th inst., has been received. I note your inquiry, as follows:

"The demand for free hog-cholera serum on the part of our farmers, has reached such proportions that this Board must seek some means of limiting the amount of serum which it will supply. At the present rate of distribution of serum it will require probably one-fourth of the income of this Board, this year. Will you be kind enough to express an opinion upon the point as to whether the State Board of Health can, under the present law, Chapter 6167, 1911, decide the amount it will supply to an applicant."

The Statute on the subject, Chapter 6167, Acts of 1911, is as follows:

"SECTION 1. The State Board of Health is hereby authorized and empowered to establish, maintain and operate a plant for the protection and distribution of hog cholera serum for the purpose of distribution to the farmers of this State upon application therefor.

"No cost shall be charged by the State Board of Health for the hog cholera serum so distributed."

Replying to your inquiry I will say that while the furnishing of hog cholera serum to the farmers of this State is a matter of great public importance, it is relatively of less importance than the protection and preservation of the health of the people of the State, and, therefore, I would say that the Legislature could hardly have intended that your Board should use so much of its annual income in furnishing such serum to the farmers as would interfere with the necessary work of the Board in looking after the public health.

The necessary conclusion is that while as much of the fund as possible should be used for the first named purpose, this should not be done to the disadvantage and neglect of the other, and my judgment is that the law should be thus interpreted.

Respectfully, (Signed) T. F. WEST,
Attorney-General.

Regarding the intent of the Legislature concerning this Act.

Quoting the letter of the Attorney General.

Illinois is the only other State in the Union which gives away without cost hog cholera serum and in Illinois it is understood that only about twenty-five per cent of the requests for the preventive is supplied to those soliciting this gratuity. In consultation with the Veterinarian of the Board, Dr. Dawson, he tells the Executive Officer, and his language is quoted as nearly as can be remembered, that:

"As no Government can hope to furnish free serum ad libitum and as no government is attempting it, it does not appear wise for Florida to do so. Yet a government has a certain duty to perform in fostering its agricultural interests. It can profitably expend the taxpayer's money in demonstrating the value of preventing and eradicating those animal diseases that threaten the prosperity of the agricultural interests. In the case of hog cholera, it could, with perfect propriety furnish the farm demonstration agents now in the employ of the State, with certain amounts of serum and virus to prevent outbreaks of this disease. Florida is already a great hog raising state, and will become a greater hog producing State if it can be demonstrated that hogs can be protected from cholera. Not only will the number be materially increased, but more important still, will be the fact that the breed will be improved, because it costs little more to produce good breeds than it does poor ones. In this way all agriculture will be improved. What benefits the farmer benefits all, and the farmer should be given the kind of help that will help himself. The Veterinarian or his Assistants going to every farm and inoculating every hog as fast as they are born should not be thought of. It is a never-ending job, and also a thankless one. The plan that I would recommend is to have a man in every section, a man of themselves to treat the hogs of a community, much in the same way as certain men now do the castration work of a neighborhood. Let the farmers' clubs get together and make it a community affair. It would be very easy now to effect such organizations, as they already exist to a certain extent and only need being put on a sounder basis. The State bought \$21,160.78 worth of serum in 1914. Had not a limit been put on the free distribution, it is highly probable that the amount would have reached \$35,000.00."

Dr. Dawson's opinion of furnishing hog cholera serum to the farmers of the State free of charge.

Dr. Dawson thinks that \$10,000.00 would be all the State ought to expend another year in demonstrating the value of serum, and that the expenditure ought to stop almost entirely after the State has been thoroughly organized along the lines which he suggests.

Second, as regards cattle tick eradication, provision for which was made by the Legislature of 1913, Dr. Dawson gives the information through his report that there are fifty dipping vats in the State. These, with one exception, that at Gainesville built for educational purposes, have been constructed by private enterprise. There has been comparatively little interest manifested in the subject during the year. Texas fever is usually a chronic disease and like many other important diseases even in the human being, creates little interest because it works its damages slowly, has been here for years and therefore creates little scare. The people who lose cattle from acute tick fever are, in many instances, settlers and are told by natives it is an acclimation fever and the cow did not have sufficient constitution to stand it. If our native cattle actually died of acute tick fever like our hogs do of cholera, we might expect the same interest to be shown in tick fever as in hog cholera.

Two counties have shown some interest in tick eradication during the year, Escambia and Dade counties. While it is not known what Escambia county has done along the line of actually getting ready to build vats and dip cattle, it is known that the county commissioners of Dade County have voted a sum of money sufficient, with the aid from the owners of the cattle and from private sources, to build all the necessary vats and hire inspectors to supervise the dipping, spraying and hand picking of cattle every two weeks regularly for five months, the time necessary to carry on this work of eradication in order to completely rid Dade County of the tick. Dade County is not a cattle county, that is, all its cattle are dairy animals. She has nothing to ship out and therefore should be the last county in the State that we should expect to eradicate ticks. However Dade County is expecting to become a cattle county and is, therefore, wise in fixing herself to begin the business with the great advantage of not having to raise cattle under conditions which the tick produces. The drainage

Tick Eradication
and building of
dipping vats.

Interest in
Escambia in tick
eradication.

What Dade County
is doing in tick
eradication.

of the Everglades has opened up vast tracts of excellent pasture land, and now that citrus canker threatens the citrus industry, her people are looking to other profitable means of gaining a livelihood. This they can certainly find in the cattle business under tick-free conditions, as these drained lands grow pasture grass in profusion.

Dade County could, under tick-free conditions furnish all the dairy products needed in that part of South Florida, and even other less favored sections. There would be no need for canned milk and cream or for shipping milk and cream from counties two hundred miles away, as is now the case. All the dairymen are in the movement of clearing the county of ticks. It is a very small job as all the cattle in the county are located near Lemon City. A few are scattered here and there along the railroad, one or two at a place. These are to be hand picked free of ticks. At other places spraying will be resorted to. There are no range cattle.

When the actual work of eradication begins it will be necessary for the Board to quarantine all the ticky area of the United States. The same restrictions must be placed on ticky cattle for everywhere as is now placed on Florida cattle going out of the State. Those shipping cattle into Dade County from any ticky country must furnish certificates to the transportation company and to the State Board of Health that the animals have been properly dipped for destroying ticks. This quarantine will be as perpetual as the tick in the United States; cannot be lifted while there is ticky territory in the United States. When the present quarantine against Dade County is lifted by the Federal Government the people there will be permitted to ship to any part of the United States the beef cattle they will probably be at that time producing.

Quarantining
ticky countries.

Another advantage, the cattlemen from surrounding counties can dip their cattle and ship them into Dade County for grazing under tick-free conditions.

Dade County has asked for nothing from the State Board of Health up to the present time except information and moral support. They have raised the money and probably have enough to carry out the work. The State Board of Health will be asked to protect their interests by declaring and main-

taining a strict quarantine against other sections. All the cattle to enter the county will be transported by the East Coast Railroad and there is little doubt but that this company will cooperate with the Board in carrying out quarantine measures. One Company, the East Coast Cattle Company, does considerable business in the county shipping about three thousand head of beef cattle into the county per annum. This constitutes a considerable portion of the beef supply to the poorer people of the county, and should be taken into consideration. The Company should build their own vat and maintain the same, but it seems good theory that the State Board of Health should stand the expense of maintaining the quarantine against this company. It could hardly be expected that the Company would provide an inspector for doing the State's work, and Dr. Dawson recommends the appointment of a man at Fort Pierce to act as Live Stock Agent at that point. The salary of such a man should be about \$300.00 a year. His duties would be to supervise the dipping and write certificates for same. Possibly he might be taught to test the dip and see that it was of proper strength.

It is highly important that the people take more interest in the question. It does not seem fair to spend such large sums of money on hogs and practically nothing on cattle. It is true the people are not demanding the expenditure as in hog cholera, but that is because those engaged in the cholera campaign can more quickly produce results to satisfy the farmer, and justify their appointment as agent, by talking "hog cholera." It takes less than a year to produce a marketable hog, and three years to produce a marketable steer; therefore the hog is a money crop for the year. His feed is also more readily produced, and I think upon the whole a more intelligent class of people are in the hog business.

When Dade County is ready for actual work it will be necessary for the State Board of Health to ask for Federal cooperation.

This means an inspector will be sent to see that the actual work is being done according to approved methods. The county will never be freed of the tick quarantine unless the Federal Government is invited to cooperate. This service will

An Inspector
needed for Dade
County to
supervise the
dipping.

Federal
authorities
raising quarantine
against Dade
County.

cost the State nothing, and will not be given except upon the request of the official body in Florida having charge of animal diseases.

Besides hog cholera and tick eradication—Texas Fever—to which special attention is directed, there will be found much other interesting matter touched upon and discussed in the report of the Veterinarian of the Board. To those who are especially concerned in the care of live stock and the diseases of the lower animals, their protection against disease, and the economic management of the industry, the deductions of Dr. Dawson should be exceedingly entertaining and instructive.

A person is either sick or he is well. That is to say, if the functions of life are being properly and healthfully performed he is well, or if there is a condition existing which deviates from the normal by actual visible symptoms, such a person is sick. Now then if a certain organism, which is usually associated with a specific disease is found either in the dejections or secretions or on the mucous surface of an individual, and the individual does not show any clinical evidence of the disease which that organism, when pathogenic, is supposed to represent the type of, the question can be well asked, "Is such an individual well or sick?" If well, what particular damaging influence has the organism referred to, being inert, on the health of another person with whom the person harboring this class of bacteria unfortunately may come in contact? Reference is especially had to supposed "diphtheria carriers." The contention is not that there may not be organisms resembling in form and shape the diphtheria bacillus in the throats of school children, when examined indiscriminately, but whether, when cases of clinical diphtheria have not previously been found among children of a class room, are these children, who are otherwise clinically healthy, although showing the presence of the diphtheria bacillus in their throats, a source of actual danger to other children in the school?

The question is serious and deserves careful consideration whether organisms, which the laboratories state to be of a form and a character peculiarly denotive of a contagious disorder or infectious nature can remain inert, and take on a

Carriers of
disease.

virulent action only under conditions which lower the vitality of the individual and his natural resistance to disease inroads, or are always virulently pathogenic. For the practical value of such determination and conclusion affect in a very important degree the action of public health officials. The habit which children unfortunately have of exchanging pencils and wetting the points, is not only an uncleanly one but a custom well calculated to transmit many diseases, not only in those who may be mildly clinically infected with diphtheria, but likewise with the streptococcus infections; an infection which causes severe constitutional disturbance. It can well be insisted upon, that it should be the duty of the teacher in charge of a class room to correct filthy habits of this kind as well as to prevent the interchange of fruit biting, gum swapping, or lunch eating, where or when one child bites a portion and allows his or her "chum" to do likewise. If "carrier cultures" could be tested out on normal and perfectly healthy humans, the results would be conclusive—one way or another, but who will permit this? Certainly no parent, even if the health authorities wished to try it out. The colon bacillus is constantly present in the intestinal tract of the human and belongs to that group of bacteria of which the typhoid bacillus is a kindred member. In morphology and under the microscope there is a striking resemblance one to the other. If, therefore, the colon bacillus can remain constantly in the intestinal canal of the human being, without harm or hazard to the individual harboring this form of bacteria, or to others whom he comes in contact with, why is it not possible that bacteria of similar shape—unless maintained to be constantly virulent—lie dormant until a lowered vital resistance occurs, which then makes it a virulent organism?

The bacteriological laboratories of the Board, of which there are six in number including the central laboratory at Jacksonville, have done most efficient service during the past year. From the reports of these useful aids to the people in determining a speedy nature of sickness much valuable information is gained.

The number of specimens examined have been 34,780 and it is exceedingly interesting to learn the character of the

Habits detrimental to the health of school children.

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Bacteriological laboratories.

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examinations made. The tables which will be found elsewhere give information that serves as an index as has been heretofore referred to, of the health status of the State and the prevalence of certain disorders in the several sections of the commonwealth. It will be noticed from a study of these tables that other public health work, than what is usually followed in laboratory routine, has occupied a large portion of the time of these institutions. Bacteriological examination of drinking water used in railroad coaches and in other methods of public transportation of the people, which must be certified to semi-annually by the Executive Officer of the Board and which is required by the United States Public Health Service, take up much of the time of the laboratories. Mention is made of this fact to direct attention to the extent and character of the work done.

The Senior Bacteriologist, Dr. Hanson, discusses in the report of the Central Laboratory, of which he is the head, the subject of disease carriers. That is to say the existence of certain pathogenic organisms in otherwise healthy persons, who manifest no clinical evidence of the disease for which the organism in question is supposed to be the type and equivalent. The Executive Officer may be expressing very heterodox opinions and may earn the reputation of being extremely radical in his views, but he cannot bring himself to believe that all instances of so-called "carrier infections" when speaking of outbreaks of certain of the infectious disorders, are really and actually due to the presence of certain bacteria, which classed as harmful may take on under certain unknown conditions, a virulent action, are nevertheless unsupported epidemiologically by clinical symptoms. While results obtained from experiments of the transmissibility of disease of this nature on the lower animals are fairly conclusive, yet, there will always exist an element of doubt as to whether the same germ impress is felt by them as would be the case in human inoculation. Here objections are reasonable for it was not known until human test cases were had in yellow fever transmission, that the virus of yellow fever was only transmitted through a special species of mosquitoes and that it was non-filterable. In a series of

Scope of Laboratory work

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Scope of Laboratory work

Diphtheria examinations for determining the prevalence of diphtheria in DeFuniak.

examinations lately made in the Central Laboratory of the State Board of Health, in over five hundred throat swabs sent in from DeFuniak, less than two per cent showed the presence of the diphtheria bacillus, but a great many did show a streptococcus infection. There had been during the year quite a sprinkling of cases of sore throat at DeFuniak which had been diagnosed as diphtheria, and on request of one of the prominent physicians, a large number of outfits were supplied because he thought that in no other way could it be determined whether the continuance of the throat trouble was due to "carrier cases" or not. The information is yet lacking of how many of the specimens submitted for examination the symptoms bore out the probable clinical diagnosis of diphtheria, and whether all possible sources of infection transmission have been included in the swabs collected. It is hoped that this information may be had before this report goes to press or to the Governor, because it may have a very decided bearing upon public health management of this disease, and in connection with public health education and a supervision of the health of the child in the public schools. There are many good reasons for believing that in the prevalence—limited or extended—of typhoid fever, if it were possible to trace the source of the infection it would be found that immediate or indirect "contact" played a more important factor in distributing the contagion than did "carriers," for in the study of the histories of several of the outbreaks of typhoid fever attributable to carrier cases the analysis made by rational reasoning show many vulnerable points not in keeping with what is known as well established facts in the etiology of this disease. More experience and investigation is yet necessary both in the bacteriological laboratory and by the etiological clinician, before it can be said without question that the "carrier" per se, without clinical support is such an important factor in transmitting disease organisms.

Tuberculosis work and handling by the Visiting Nurse.

At the March meeting of the Board in Key West, three sociological workers for special tuberculosis work were authorized. The State Health Officer desired to have at least 15 of these "Tuberculosis Instructors," but the Board thought differently, and with these three the work was started. The "Visiting Nurse" for the Western District was appointed in

April. The first month of her appointment she remained in Pensacola, her resident town, the whole month visiting patients in that vicinity.

In October the other two were appointed and started a survey of their territories, known as the Southern and Central Districts. These districts comprise the following counties with population for each district: Western District, Counties 17. Bay, Calhoun, Escambia, Franklin, Gadsden, Holmes, Jackson, Jefferson, LaFayette, Leon, Liberty, Madison, Santa Rosa, Taylor, Wakulla, Walton, Washington. Population (1910) 238,902. Central District: Counties, 24. Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Duval, Hamilton, Hernando, Lake, Levy, Marion, Nassau, Orange, Osceola, Pasco, Putnam, St. John, St. Lucie, Seminole, Sumter, Suwannee, Volusia. Population, (1910) 274,869. (Jacksonville is not included in this district as they have a city nurse.) Southern District, Counties, 9. Dade, DeSoto, Hillsborough, Lee, Manatee, Monroe, Palm Beach, Pinellas, Polk. Population 171,639.

Divisions of the State into Districts for work of Visiting Nurses.

When it is considered that Florida has a population of nearly a million, with an area of 54,861 square miles, it is hardly fair to the work or the nurses, and the importance attached to the same to attempt a report at this time. However there were two hundred and seventy-one patients visited to whom instructions were given. Of this number 207 were white and 64 colored.

Many times owing to poor railroad facilities in some communities, time is lost in getting about or a too hurried visit to patients and physicians is unavoidably made. These workers even against such odds have made good headway and show what could be accomplished with a full working corps of intelligent women. Many hardships are encountered, such as belated train schedules, poorly prepared food in out of the way places, and uncomfortable sleeping conveniences, but they always find the patient reported, even though it takes a long walk, or drive or row boat trip combined, to reach the destination.

It can easily be seen that with such large territories to cover, these workers cannot keep in the close touch with patients that is necessary to make them earnest and helpful

themselves. Then too, the nurse feels that she cannot devote as much time to one community as is sometimes thought to be necessary, in order to help the family over the first few days of reorganized methods of living. Then too, a great many of the patients will be dead before she can return, which will tend to make the family lose confidence in the Home Treatment plan, as there are from day to day little things that the family feel that it can talk over with a nurse, rather than their physician who is always to them a busy man. Unfortunately, many times they have lost faith in the doctor because of his seeming indifference to their particular case.

To perfect the plan of assisting the consumptives of the State in better hygienic living, with the hope of improvement and still further expectation of arresting the disease, the Executive Officer should be permitted to enlist not less than fifteen supervisors in this health work, so that it may be possible to get a more accurate history of the sick when discovered and thus keep them under, it might be said, constant observation.

Sick people forget very easily even though they are inclined to accept advice, and too often cases of consumption occur in families where the bread problem is an all-absorbing one. There is little time left from the multitudinous duties of the mother—for the burden falls on her—to sit down and consider seriously advice which the nurse left on her last visit. Therefore, it can be understood how necessary it is that these unfortunates should be seen frequently in order that their hope may be stimulated and they may observe and fulfill directions for their own care and the protection of their loved ones.

This corps of sociological workers would mean an annual expenditure of \$18,000.00 with added expense for traveling, making an appropriation in all of about \$30,000.00 for this one purpose—the “Prevention of Tuberculosis”—which is not an unreasonable sum for the State to expend in an effort to lessen the number of cases as well as to hold out hope to those already sick, of having their disease arrested.

This plan for an anti-tuberculosis campaign is a more feasible, rational and practical way of dealing with the disease than by institutional treatment. In the latter only comparatively

Plans to enlarge the scope of the work and obtain better results.

few can be reached, and a great majority of whom there is no accurate information, continue to sow germs of the disease, which multiply cases, and thereby lessen the working capacity of this state. Labor means production. Production a money increase, therefore, everything that tends to decrease the working force of the citizen, likewise occasions a money loss.

In an address delivered to the Federation of Women's Clubs of Florida at Lakeland, last December the State Health Officer went quite minutely into the value and benefit of the “home treatment” and by sociological workers as compared with an institutional care of the unfortunates.

It will be noticed in the reports of the Assistants to the State Health Officer, that reference is frequently made to surface closets defective in construction, as being the propagating cause of hookworm and of typhoid fever through fly infection. It is a well established fact that in this State these two diseases owe their existence, and it can well be said continuance to the storehouses of human filth, which are faultily built and controlled. Perhaps it will not be putting the matter too strongly, when it is said that there is a total absence of those conveniences, so needful to health, in many rural homes.

An official high in the educational interests of the State is responsible for the statement, when inquiry was made, that over fifty per cent of the rural schools of the State are unprovided with surface closets of any kind. Is it any wonder therefore that notwithstanding the vigorous campaign which the State Board of Health carried on against hookworm, for several years, that the effort has resulted in so little permanent benefit, when conditions are allowed to continue—soil pollution—which is known to harbor the larvae which infect the feet of barefoot children, and thus keep up the vicious cycle of hookworm contamination? Is it not about time that the Legislature should take cognizance of such neglect on the part of the County School authorities and if there is no provision of law by which surface toilets can be constructed and thoroughly screened then to enact such a law and to make it an imperative duty of every principal of school, rural or civic, to daily exercise a supervision over these necessities for health, to see that the interior of the buildings are kept clean and to punish

Defectively constructed surface closets.

Rural schools unprovided with surface closets.

rigorously any defilement? The school trustees or supervisors should be required to have the excreta from these buildings disposed of in a sanitary manner and the grounds in and about the buildings properly purified. If it is practicable, and there is no sensible reason why it should not be a wise suggestion, a legislative enactment might require that all privies or surface closets when built without sewered areas, in any portion of the State should be screened and made fly proof, for it is known that typhoid fever and other of the intestinal disorders are insect-borne and that the fly is mainly responsible for the propagation and spread of these diseases in Florida. The drinking waters of this State are pure; that is to say, are free from intestinal contamination and can be safely used. It has only occurred twice in the history of the Board that typhoid fever has been traced to water used for drinking. When so detected the use was forbidden and the prevalence quickly subsided.

Drinking water
of the State.

Flies and Typhoid.

Therefore, the Executive Officer is convinced in the opinion that if the possible infection of the fly can be prevented, that there would be a marked lessening of intestinal sickness in the rural districts of the State and a rapid elimination of typhoid fever. This wished for health betterment can be hastened by compelling construction of surface privies or closets in such a manner that flies cannot reach the wastes of the body, and carry possible infection to food, for it is only through the digestive tract that the poison multiplies and sickens.

During the year 6,000 letters have been received and answered from the Executive Office in addition to which about an equal number were answered by postals, besides much other correspondence has been attended to, which did not call for replies. In addition to this large mass of letter writing, 111,760 pieces of literature on sanitary subjects have been distributed and mailed to those asking for the same. And not only to persons asking for information of this kind has it been the pleasure of the office to supply, but to every one who it might be thought was at all interested in health matters, have pamphlets been sent, on sanitary topics. The compilation of articles for the HEALTH NOTES each month has taken up much time of the Executive Office, and no little effort to prepare and make

interestingly readable and which together with the weekly issue of the "press bulletin" demanded care in arranging. The main effort however, of the Executive Office in an educational way has been directed to imparting information to those who seemed willing to be instructed or advised in sanitary or hygienic matters, and therefore no opportunity has been lost to assist any and every one seeking to be taught and set straight on disputed questions relating to ways and manner of healthful living. No inquiry has ever been considered too insignificant to have prompt attention and a cheerful acknowledgment. Nor has it been thought to be detracting from the dignity of the office to say "I don't know" when only theorizing could offer an answer, and actual facts were not known. The Executive Office has never approved of advising the people along sanitary lines that well digested and proven out facts could not sustain. Practical sanitation, which intelligent people can understand and appreciate the value of, inspires confidence: that which is based mainly on theory, is rejected as doubtful, as being unsafe to accept.

Office routine
and matters.

With increased responsibilities requiring expenditures, placed upon the State Board of Health by each successive legislature and additional provisions of work and construction enacted by the Board itself at regular and called meetings, the outlay of money from the Board's legitimate income, the half mill tax on the assessable property of the State doubtless appears to the average citizen to be large, but when it is taken into consideration that the Florida State Board of Health has a versatile field of operation not usually filled by other State Boards of Health, and embraces within its scope of labors the care of domestic animals as well as the human, and that the legislatures have been particularly generous in the treatment of the former, the maintenance of which charity to the commercial interests of the State is all charged against the State Board of Health fund, the Executive Officer does not think that he can be justly accused of extravagance in spending money for measures which are authorized by statute and by the Board, because results have justified the cost and it is results that the people of Florida are looking for; results which inspire confidence in the ability of the State Board of Health to cope

Receipts and
expenditures.

with problems of health management—within the State and a manifest capability to prevent by practical means and common sense methods disease agencies from gaining admittance, without at the same time disrupting business and causing needless alarm and financial loss.

The accompanying table will show in minute detail the different items of disbursement and for the purposes expended. The State Health Officer has heard that it has been asked where has such a large sum of money gone, and for what spent? as if there was a wastefulness of the same. Those persons need not, had they taken the trouble to read the annual reports of the Board, have expressed such surprise because each year for twenty-six years a table of this expenditure has been prepared and submitted at each annual meeting of the Board and forwarded to the Governor of the State. Not only so made public, but the reports have been printed and freely distributed for the asking. Each elected member of the Legislature, Cabinet Officers and prominent organizations of the State have been supplied with a copy as well as those citizens who the Executive Officer has thought to be especially interested in State sanitation and preventive medicine. If those charged with the conduction of public affairs of the State will not intelligently acquaint themselves with the movements of the different departments of the State Government, by making the inquiry, or by investigation, the failure to be informed, should not be charged against the Executive Officers of the several boards.

The Expenditures
in Detail.

Per diem and mileage, members of the Board, February, March and July meetings.....	\$ 602.40	
Office equipment, traveling expenses and remuneration account special details members of the Board	245.11	\$ 847.51
Salaries and traveling expenses, Executive Department:		
Salary State Health Officer.....	\$ 3,000.00	
Traveling expenses, State Health Officer.....	1,919.58	\$ 4,919.58
Salaries of eight Assistants to the State Health Officer, and one Assistant resigned.....	\$ 17,666.32	
Traveling expenses, Assistants to the State Health Officer	4,705.19	\$ 22,371.51

STATE BOARD OF HEALTH OF FLORIDA

Salaries, two County Agents.....	\$ 1,200.00	\$ 1,200.00
Salaries of Sanitary Patrolmen, Jacksonville, Tampa, Pensacola and Key West.....	4,800.00	
Miscellaneous expenses, sanitary patrol service..	192.30	\$ 4,992.30
Salaries, three Tuberculosis District Nurses.....	\$ 1,375.00	
Travel expenses, Tuberculosis District Nurses...	603.05	\$ 1,978.05
Salaries Veterinarian of the State Board of Health, one Assistant and one Assistant resigned	\$ 4,099.92	
Travel expenses, Veterinary Division.....	1,560.57	\$ 5,660.49
Maintenance of Executive Office, Jacksonville:		
Clerical Assistance: salaries of three clerks and office boy, and special clerical service.....	\$ 4,439.96	
Vital Statistics: salary and traveling expenses of Vital Statistician, office expenses and payments for reports.....	\$ 2,442.39	
General office expenses, including postage, expressage and office fixtures.....	1,974.00	
Printing, stationery, etc.....	4,145.72	
Telephone and telegraph tolls.....	680.46	
Insurance and miscellaneous items.....	803.74	\$ 14,486.27
Library: equipment and maintenance.....		\$ 1,039.95
Administration Building: maintenance and fixtures		1,066.38
Grounds, Administration Building: maintenance and laying of driveways.....		920.03
County Isolation Hospitals, Equipment and Maintenance:		
Dade County.....	\$ 180.00	
Duval County.....	2,460.72	
Escambia County.....	852.23	
Hillsborough County.....	1,006.55	\$ 4,499.50
Smallpox expense, unclassified.....		1,849.38
Vaccine (smallpox).....		845.00
Diphtheria and tetanus antitoxin, and typhoid vaccine for the indigent.....		644.90
Pasteur treatment for the indigent.....		1,480.90
Expense incident to uncinariasis, unclassified.....		593.16
Reimbursement for glandered animals.....		1,700.00
Hog cholera serum.....		21,160.78
Crippled Children: hospital and incidental expense..		5,172.47
Sanitary engineering.....		100.00
Exhibits and publicity.....		1,159.41
Bacteriological Laboratories:		
Jacksonville: Salaries, Senior Bacteriologist, two assistants, stenographer and two orderlies.....	\$ 7,897.92	
Equipment and maintenance.....	2,534.65	
Construction of animal house.....	2,284.00	\$ 12,716.57
Tampa: Salaries two bacteriologists, stenographer and janitor.....	\$ 4,171.60	
Equipment and maintenance.....	1,402.33	\$ 5,573.93

Pensacola: Salaries of one bacteriologist and office boy.....	\$ 2,229.92	
Equipment and maintenance.....	864.49	
Laboratory building.....	6,145.56	\$ 9,239.97
Miami: Salary one bacteriologist.....	\$ 333.32	
Equipment and maintenance.....	1,386.78	\$ 1,720.10
Tallahassee: Salary one bacteriologist.....	\$ 166.66	
Equipment and maintenance.....	395.91	\$ 562.57
Key West: Equipment and maintenance.....	\$ 511.32	\$ 511.32
Total expenditures, 1914.....		\$129,012.03

Receipts.	Regular Requisition	Special Requisition	Returned to Comptroller	Total
January	\$ 3,882.64	\$ 3,271.83	\$.....	\$ 7,154.47
February	3,904.64	4,060.86		
March	3,903.64	3,634.59		11,600.09
April	4,436.60	869.65		
May	4,682.60	3,891.34	.05	8,664.58
June	4,611.60	5,667.52		
June and July....		1,932.12		12,036.24
July	4,525.10	4,706.60	8.11	9,381.09
August	4,640.10	750.00		
September	4,644.11	2,946.13		8,307.73
		4,030.32		4,030.32
October	4,894.73	4,076.33		8,601.43
November	4,689.10	5,451.98	8.60	10,083.48
December	4,781.76	750.00		
		4,323.68		
		1,370.74	21.06	11,067.47
		6,375.62		11,270.35
		4,234.41		
		3,658.80		12,582.31
		750.00		
		79.31		
		3,349.22		
		2,788.97		
		2,483.21		14,232.47
Totals.....	\$53,596.62	\$75,453.23	\$ 37.82	\$129,012.03
Total Receipts, 1914.....				\$129,049.85
Returned to Comptroller, 1914.....				37.82
Total Amount Expended, 1914.....				\$129,012.03

In view of the fact that the railroad companies operating in the State have all expressed a willingness, and in one or two instances a desire to extend to the employees of the State Board of Health, the courtesy of free transportation over their lines, it does not seem improper or inconsistent with either the morals or rectitude of the State that such offer should not

be accepted, particularly as a saving to the Board's treasury would be effected each year of many thousand dollars. Accordingly at the last session of the Legislature a bill was prepared and introduced whereby the employees of the Board, when traveling on the Board's business, would be permitted to accept free transportation from the rail and steamboat companies in the State, and the companies also be granted permission to give the same. As there cannot be any virtuous obliquity in this enactment, especially as sheriffs of the State who, by law, are entitled to and do receive mileage fees when executing the mandates of a court, are given passes, and further as State Health Officials are performing a quasi-philanthropic duty in an endeavor to promote and protect the health of Florida's citizens, it does not seem that there should be any opposition on the part of the Legislature to grant this concession. While the State Board of Health cannot be said to be a purely eleemosynary institution—and these are exempted from the restrictions against passes—yet, there is an element of charitable work in the efforts put forth by the Board, which without any great stretching of word construction could bring the employees of the Board within the scope of the privilege and not violate the spirit of the law. The "pass privilege" to employees of State Board of Health is given in a great many States of the Union, and in some no pass except the showing of a badge is required when a representative of the Board is traveling on public and official duty connected with the execution of health statutes or to carry out the purposes of health management. The bill prepared and introduced for the purpose of obtaining the legislative consent to the measure requested by the State Board of Health, while meeting, it is understood, with the approval of the majority of the legislative body individually, yet failed to pass, because, it was disapproved of by the Railroad Commission. On what grounds this disapproval was made is not apparent, nor is it known that any was given.

It is not believed that the purport of economy and efficiency to the State which a measure of this kind would fulfill, could have been thoroughly understood. Precedents have been established in this regard in other States, and the advantage in quick action and frequent investigations, without having to

Free transportation of State Board of Health employees when travelling on health missions in the State.

hesitate and weigh the cost of travel should certainly appeal to the thoughtful citizen and to all who are deeply concerned in the conservation of health with the greatest measure of economy. If the Board will interest itself in bringing to the attention of the Governor and lawmakers a provident provision of this kind, it is believed by the Executive Officer that any untoward hostility would be overcome, especially when a money saving, which the transportation companies are willing to donate, could be plainly shown. The members of the State Board of Health, who under the Statute have their traveling expenses provided for by a specified mileage, are under the Constitution, as Officers of the State, appointed by the Governor, forbidden to accept "free transportation" but the Executive Officer of the Board and his Assistants together with all others connected with the executive office, are employees of the Board and if the Legislature will permit cannot be affected by any Constitutional restriction.

This report would not be complete if due mention was not made of the most excellent work accomplished during the year under the provisions of the "Crippled Children" Act, a measure which was passed by the Legislature of 1911. The account of operations performed and results obtained is found elsewhere in the very admirable report of Dr. Raymond C. Turck, and is very interesting and instructive reading.

Since the passage of the bill authorizing this charity by the State Board of Health, Dr. Turck has had full charge of the surgical management of these cases in the correction of limb deformities of indigent children of the State, who alone under the conditions of law are the beneficiaries of the State's charity in this respect.

The thanks of the Board should be extended to Dr. Turck in the warmest manner of commendation, for the valuable and skillful service that he has given these helpless little ones, who, without his expert professional knowledge so generously given, would still be helpless and pitiable. The assistance which the Statute permits to be given to children who are deformed in limb or limbs, or who through sickness, accident or at birth, are unfortunately deprived of the use of any of the extremities of the body to an extent which would prevent them from

Crippled
Children.

Work
accomplished for
the crippled
indigent children.

earning a living later on in life, is a praiseworthy effort on the part of the State to provide an opportunity to transform a helpless cripple into a useful self-sustaining citizen. The State Board of Health appreciates the confidence shown by the Legislature when it confided this care of suffering humanity to its supervision. As the number of crippled children applying for relief, is increasing each year, the Board should consider the necessity for providing for their care in a building owned and operated by the State Board of Health in accordance with the terms of the Act. The provision to board these indigent children in hospitals or other institutions was to continue only until the number requiring aid and help increased to such proportion as would warrant the Board in erecting a hospital of its own for the purpose.

Dr. Turck believes that this period has been reached and that the Board should cast about for a fit location on which to put up a suitable building, properly equipped for all purposes which a corrective treatment of every manner of deformity might demand. Possibly it is thought that the St. Luke's Hospital Association might be induced to donate sufficient space on its grounds to erect a ward to be operated by the State Board of Health in connection with the management of St. Luke's Hospital and the opinion has been advanced that such construction along modern lines for a ward especially designed for the correction of deformities could be completed for twenty-five thousand dollars. The "up-keep" and maintenance of such a ward would depend largely on the number of children admitted, but hardly appreciably more than is now paid for the sustenance of the patients at St. Luke's and Brewster Hospitals. This is a matter which deserves the earnest consideration of the Board, and its importance should not be overlooked.

From all that has been written and discussed in these pages and the arguments submitted, what recommendations are further necessary or thought to be, to increase the healthfulness of the people of Florida as a State, and to help individual citizens thereof in keeping well and avoiding causes of sickness it is imagined can be easily anticipated. Omitting for the moment the third person in which style of writing reports

Building or ward
now necessary to
care for crippled
children.

The State Health Officer assumes all responsibility for statements made in this report.

of this kind from the Executive Office have heretofore been made, and which is usually adopted, the State Health Officer wishes to assume entire responsibility in opinions expressed and is altogether answerable for any dogmas which may be considered dissenting and in opposition to customary or accepted views of bacteriologists. This explanation is made that the Board may not be embarrassed if entertaining different views and opinions from those expressed by the State Health Officer, and which might mislead the public if the Board held contrariwise ideas. To further improve such conditions pertaining to health, which will lessen sickness of all kinds, lower the death rate of the State, and incite the people to a greater activity in suppressing preventable diseases, the State Health Officer submits the following recommendations:

Recommendations

Screening food against flies.

First. That the intention of the present State statute which proposes to guard the health of the traveling public against typhoid fever and allied disorders, by well screened kitchens, dining rooms, and "hallways leading thereto" shall have its protective powers enlarged by statute so that all meat shops, butcher shops and markets, grocery stores, where food is sold for consumption in the raw state, fruit stands, railroad lunch counters, and other places where food is served to wayfarers and itinerants, and all dining and buffet cars operated in the State, shall be well screened by wire netting, with mesh sufficiently close as not to admit flies. Not only shall these places of food disposal be screened but it should be made the duty of owner, occupant or operator to see that there are no flies in the dining rooms, kitchens, dining or buffet cars, or other mentioned places.

Surface closets should be fly-proof.

Second. That by legislative enactment, all surface closets and privies used for the deposit of human excreta shall be fly proof in construction, and in conformity with plans recommended and approved of by the State Board of Health. This plan of building is easily erected and inexpensive to construct.

Third. That also by legislative enactment, all school boards in this State shall be compelled to have every school building provided with adequate facilities for Nature's Conveniences by either water carriage or surface closets, separate for sexes, and in rural districts where sewerage systems do

not exist, the surface closets to be of fly-proof construction. That the trustees or supervisors of a school shall be held strictly accountable for the cleanliness and good morals pertaining to such buildings. The condition of these buildings and the care exercised in keeping them in proper sanitary state should be a matter of investigation and presentment by the Grand Jury of a County at each term of a circuit court.

Fourth. That the Legislature be urged to vitalize the statute of 1899, establishing the Bureau of Vital Statistics under the supervision of the State Health Officer as Registrar of said Bureau, by amendments providing for the practical provisions found essential by other states; the statute to provide for urban registration at first and later for complete statewide registration, rural as well as urban, when and as the time is deemed ripe. And that all records and data relating to the life and health of the people of the State now in possession of the Board and which can hereafter be collected, be properly and safely housed, kept, indexed and published by said Bureau, so as to be of the utmost use and value.

Recommendations concerning Vital Statistics.

Also that all possible data of Morbidity, the statistics of sickness, the most important of all vital statistics, be gathered and made useful by the said Bureau, and that the above amending legislation make special provision for the Board to have power to make rules and regulations of full force and effect as law for the collection of such records.

Fifth. That the Legislature be requested and earnestly petitioned to permit by enactment the transportation companies operating in Florida to give passes to the employees of the State Board of Health when traveling on official business of the health department and in the interest of health conservation. The argument for such request, is economy to the State and a more prompt and efficient service to the people.

Recommendation free transportation be allowed employees of the Board on State business.

Sixth. That the existing statute requiring the State Board of Health to furnish hog cholera serum free to the agricultural interests of the State be so amended as to direct that this preventive of disease to the swine of the State shall only be given free for demonstration purposes; the free distribution to be withdrawn when information in the use of the serum has been gained by competent instructions. The argument for this

Withdrawing free hog cholera serum.

recommendation is that to issue hog cholera serum as a gratuity to any one for the asking would very soon bankrupt the State Board of Health's treasury, and it is not supposable that the Legislature when passing this measure ever contemplated embarrassing the operation of the State Board of Health in its special charge of looking after the health of the people, by imposing an obligation of so evidently an agricultural commercial proposition, in detracting so much of the Board's annual income from the really legitimate purpose called for by the Constitution of the State, in Article Fifteen of that Instrument.

Seventh. That legislative sanction shall be sought towards improving the pulmonary tuberculous of the State, of whom it is variously estimated there are about fifteen to twenty thousand, by the home treatment of the disease under the care and management of the State Board of Health, through a corps of intelligent and trained sociological workers, who distributed throughout the State in designated districts may frequently visit the sick of this disease and give needful information respecting individual treatment, by hygienic and sanitary rules. This advice to be extended to the family that it too may know how to avoid contracting the disease, and may make surroundings of the sufferer more comfortable and safer to other members. The argument and reasons for this recommendation are set forth in detail elsewhere in the text of this report, and;

Eighth. That as soon as the funds of the State Board of Health will permit a hospital for crippled children shall be erected and equipped in accordance with the terms of the Act of 1911 providing for the same.

In conclusion, the State Health Officer wishes to express his thanks and appreciation to every member of the Executive Office, which includes the laboratory divisions, for the diligence which has been shown in carrying out the duty and apportionment of work which has been given to each to fulfill. By a cheerful and willing cooperation my associates in health

Visiting Nurses
for the State
doing tuberculosis
work.

Hospital
for Crippled
Children.

work have shown a deep interest in the welfare of the institution, which is greatly appreciated. To yourself and the other members of the Board the State Health Officer expresses his grateful acknowledgments for the generous support given him in executing the policies of the Board.

Respectfully submitted,

JOSEPH Y. PORTER,
*State Health Officer and Executive
Officer of the Board.*

HYDROPHOBIA
Treatment Administered for its Prevention, by the State Board of Health, During 1914

Case Record No.	Age	Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Evidence of Rabies	Pasteur Treatment	Liability
									Begun	Ended
442	6	M*	Jacksonville	Bite	Lip	Jan. 4	Dog	Clinical	Jan. 8	Jan. 28
443	15	M	Dowling Park	Bite	Hand	Jan. 4	Dog	Negri bodies	Jan. 11	Jan. 31
444	6	M	Ft. George	Bite	Thumb	Jan. 5	Dog	Negri bodies	Jan. 11	Jan. 31
445	35	M	Newberry	Bite	Cheek	Dec. 1	Dog	Negri bodies	Jan. 19	Feb. 8
446	30	F	Dowling Park	Bite	Leg	Jan. 17	Dog	Negri bodies	Jan. 20	Feb. 8
447	21	M	Dowling Park	Bite	Buttock	Jan. 17	Dog	Negri bodies	Jan. 20	Feb. 8
448	27	M	Dowling Park	Bite	Thumb	Jan. 17	Dog	Negri bodies	Jan. 20	Feb. 8
449	15	M	Dowling Park	Bite	L. Thigh	Jan. 17	Dog	Negri bodies	Jan. 20	Feb. 8
450	18	M	Dowling Park	Bite	Thigh	Jan. 17	Dog	Negri bodies	Jan. 21	Feb. 9
451	43	M	Newberry	Bite	Hand	Jan. 17	Dog	Negri bodies	Jan. 23	Feb. 12
452	4	F	Tampa	Bite	Head and Arm	Dec. 10	Dog	Negri bodies	Jan. 23	Feb. 12
453	36	F	Jacksonville	Bite	Finger	Feb. 17	Dog	Negri bodies	Feb. 12	Mar. 3
454	Ad	M*	Ocala	Bite	.....	.....	Rat	Negri bodies	Feb. 20	Mar. 12
455	35	M	Live Oak	Bite	.....	.....	Dog	Negri bodies	Feb. 25	Mar. 17
456	Ad	M*	Ocala	Bite	Calf Leg	Feb. 20	Dog	Negri bodies	Feb. 26	Mar. 18
457	Ad	M*	Ocala	Bite	.....	.....	Dog	Negri bodies	Feb. 27	Mar. 19
458	Ad	M*	Ocala	Bite	.....	.....	Dog	Negri bodies	Feb. 27	Mar. 19
459	Ad	M*	Ocala	Bite	.....	.....	Dog	Negri bodies	Feb. 27	Mar. 19
460	Ad	M*	Live Oak	Bite	.....	.....	Dog	Negri bodies	Feb. 28	Mar. 20
461	Ad	F	Jacksonville	Saliva	Arm	.....	Dog	Negri bodies	Mar. 6	Mar. 26
462	10	M	Jacksonville	Saliva	Hands	Mar. 11	Dog	Negri bodies	Mar. 16	Mar. 26
463	11	M	Jacksonville	Saliva	Hands	Mar. 11	Dog	Negri bodies	Mar. 16	Apr. 5
464	38	M	Tampa	Bite	Hand	Mar. 12	Dog	Negri bodies	Mar. 16	Apr. 5
465	11	M	Tampa	Bite	Hand	Mar. 16	Dog	Negri bodies	Mar. 24	Apr. 13
466	42	M	Tampa	Bite	Leg	Mar. 16	Dog	Negri bodies	Mar. 24	Apr. 13
467	20	M	Tampa	Bite	Hand	Mar. 16	Dog	Negri bodies	Mar. 24	Apr. 13
468	26	M	Tampa	Bite	R. Leg	Mar. 16	Dog	Negri bodies	Mar. 24	Apr. 13
469	2	M	Tampa	Bite	.....	.....	Dog	Negri bodies	Mar. 30	Apr. 19

Case Record No.	Age	Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Evidence of Rabies	Pasteur Treatment	Liability
									Begun	Ended
470	45	M	Tampa	Saliva	Thumb	Apr. 8	Cow	Negri bodies	Apr. 14	May 4
471	11	M*	Live Oak	Bite	R. Hand	Apr. 23	Dog	Negri bodies	Apr. 30	May 20
472	34	F	Tampa	Bite	Finger	Apr. 27	Dog	Negri bodies	Apr. 30	May 20
473	30	F	Newberry	Bite	L. Leg	Apr. 22	Dog	Negri bodies	May 1	May 21
474	5	F	Tampa	Bite	Wrist	Mar. 31	Cat	None	May 2	May 22
475	33	F	Tampa	Bite	R. Thumb	.....	Dog	Inoc. Rabbit	May 4	May 27
476	57	M	Tampa	Bite	Leg	.....	Dog	Negri bodies	May 5	May 25
477	Ad	M	Jacksonville	Bite	.....	Apr. 29	Dog	Negri bodies	May 10	May 30
478	Ad	F	Jacksonville	Saliva	Finger	May 7	Dog	Negri bodies	May 10	May 30
479	Ad	M	Jacksonville	Bite	Hip	May 7	Dog	Negri bodies	May 10	May 30
480	16	F	Greenwood	Bite	Thumb	May 7	Dog	Negri bodies	May 10	May 30
481	21	M	Zephyrhills	Bite	Thumb	May 9	Hog	Negri bodies	May 12	Jun. 1
482	36	F	Jacksonville	Bite	Thumb	May 11	Cat	Clinical	May 16	Jun. 5
483	Ad	M	Jacksonville	Bite	Finger	.....	Cat	Negri bodies	May 21	Jun. 10
484	26	F	Jacksonville	Bite	Hand and Legs	May 19	Cat	Negri bodies	May 21	Jun. 10
485	9	M	Tampa	Bite	Leg	.....	Cat	Negri bodies	May 28	Jun. 17
486	9	F	Tampa	Bite	Thumb	.....	Cat	Negri bodies	May 29	Jun. 18
487	25	M	Jacksonville	Bite	.....	.....	Cat	Clinical	May 31	Jun. 20
488	33	F*	Sneads	Bite	.....	May 28	Dog	Clinical	May 31	Jun. 20
489	12	M*	St. Augustine	Bite	Shoulder	May 31	Dog	Clinical	Jun. 3	Jun. 20
490	6	M	Oklawaha	Bite	R. Hand	Jun. 8	Dog	Negri bodies	Jun. 12	Jul. 2
491	45	F*	Oklawaha	Bite	Arm	Jun. 8	Dog	Negri bodies	Jun. 13	Jul. 3
492	45	F	Jacksonville	Bite	Hand and Leg	Jun. 12	Dog	Negri bodies	Jun. 15	Jul. 5
493	7	M*	Micanopy	Bite	R. Leg	Jun. 9	Cat	Clinical	Jun. 19	Jul. 7
494	7	M	Green Cove Spgs.	Bite	Buttock	Jun. 14	Dog	Suggestive	Jun. 18	Jul. 6
495	8	M	Jacksonville	Bite	Leg	Jun. 13	Dog	Clinical	Jun. 18	Jul. 6
496	11	M	Jacksonville	Bite	Thumb	Jun. 21	Dog	Clinical	Jun. 24	Jul. 14
497	55	F*	Madison	Bite	Foot	.....	Cat	Negri bodies	Jul. 9	Jul. 29
498	20	M	Bartow	Bite	Ankle	Jul. 11	Cat	Clinical	Jul. 16	Aug. 11
499	4	F	Jacksonville	Bite	Leg	Jul. 9	Dog	Negri bodies	Jul. 18	Aug. 9
500	Ad	M	Tampa	Bite	Leg	Jul. 24	Dog	Negri bodies	Jul. 27	Aug. 16
501	36	M	Cedar Keys	Bite	Thumbs	Jul. 22	Dog	Negri bodies	Jul. 27	Aug. 16
502	18	F	O'Brien	Bite	Leg	Jul. 23	Dog	Negri bodies	Jul. 30	Aug. 19
503	boy	M	O'Brien	Bite	Leg	Jul. 23	Dog	Negri bodies	Jul. 30	Aug. 19
504	31	M	S. Jacksonville	Bite	Finger	Aug. 6	Dog	Clinical	Aug. 17	Sep. 6
505	42	M	Tampa	Bite	Hand and Foot	Aug. 6	Dog	Clinical	Aug. 18	Sep. 7
506	10	M*	Hawthorne	Bite	Leg	Aug. 14	Dog	Negri bodies	Aug. 20	Sep. 9
507	5	F	Havana	Bite	Hand	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15

HYDROPHOBIA—Continued
Treatment Administered for its Prevention, by the State Board of Health, During 1914

Case Record No.	Age	Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Evidence of Rabies	Treatment		Liability
									Begun	Ended	
508	9	F	Havana	Bite	Foot	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid
509	8	F	Havana	Bite	Foot	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid
510	11	M	Havana	Bite	Foot	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid
511	38	M	Havana	Bite	Fingers	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid
512	5	M	Live Oak	Bite	R. Thumb	Aug. 18	Kitten	Clinical	Aug. 27	Sep. 16	Indigent
513	6	M	Ocala	Bite	Abdomen	Aug. 26	.....	Clinical	Aug. 31	Sep. 20	Indigent
514	10	M	Tampa	Bite	Arm	Sep. 1	Dog	Clinical	Sep. 3	Sep. 23	Paid
515	10	F	Micanopy	Bite	Toe	.....	Dog	Negri bodies	Sep. 9	Sep. 29	Indigent
516	3	F	Perry	Bite	Ear and Face	Sep. 3	Dog	Negri bodies	Sep. 9	Sep. 29	Indigent
517	36	M	Perry	Bite	L. Leg	Sep. 3	Dog	Negri bodies	Sep. 9	Sep. 29	Indigent
518	7	M	Perry	Bite	Forearm	Sep. 3	Dog	Negri bodies	Sep. 9	Sep. 29	Indigent
519	5	M	Perry	Bite	L. Elbow	Sep. 1	Dog	Negri bodies	Sep. 12	Sep. 29	Indigent
520	6	M	Perry	Bite	L. Elbow	Sep. 3	Dog	Negri bodies	Sep. 12	Oct. 3	Indigent
521	7	M	Monticello	Bite	Head & Hands	Sep. 10	Dog	Negri bodies	Sep. 14	Oct. 3	Indigent
522	14	M	Tampa	Bite	L. Knee	Sep. 10	Dog	Negri bodies	Sep. 14	Oct. 4	Indigent
523	13	M	Gainesville	Bite	Hand	Sep. 25	Dog	Negri bodies	Sep. 28	Oct. 18	Paid
524	10	M	Tampa	Bite	Finger	.....	Cat	Negri bodies	Sep. 30	Oct. 20	Indigent
525	6	F	Dowling Park	Bite	Hand	.....	Dog	Negri bodies	Oct. 4	Oct. 24	Paid
526	7	F	Newberry	Bite	Forearm	Oct. 1	Dog	Clinical	Oct. 26	Nov. 15	Indigent
527	10	M	Lithia	Bite	.....	.....	Dog	Negri bodies	Oct. 28	Nov. 17	Indigent
528	19	M	Tampa	Bite	Hand	Nov. 12	Dog	Negri bodies	Nov. 21	Dec. 11	Paid
529	45	M	Lithia	Scratch	Hand	Nov. 25	Dog	Clinical	Nov. 29	Dec. 19	Paid
530	8 mo.	*	St. Augustine	Bite	Upper Lip	.....	Dog	Negri bodies	Nov. 30	Dec. 20	Paid
									.....	.....	Indigent

*Colored

EXPLANATORY NOTES.

Case 442: Child could not be located when treatment arrived. Treatment canceled.

Case 461: Patient had scratches on arm and was licked by dog after showing symptoms of rabies.

Case 462: Patient had sores on hands and arms, supposed to have been licked by rabid dog.

Case 463: Sores on hands of patient licked by dog having symptoms of rabies.

Case 470: Patient had hand in cow's mouth. Crack in skin on thumb supposed to have become infected.

Case 478: Abrasion on second finger of patient received saliva of dog found to be rabid.

Case 493: Cat had been bitten by mad dog prior to biting child.

Case 512: Animal had several convulsions morning of biting boy. Was killed and head submitted to State Board of Health. Found negative. Animal inoculation resulted in death of inoculated animal, from unknown cause. There having been a number of rabid animals in Live Oak some time prior to the bite, treatment was considered advisable.

Case 525: Dog that bit child had what is known as "black tongue;" was killed and head carried to physician, who told parents there was no danger, and threw head in river. Later on a dog that had been bitten by this dog went mad. Treatment was then ordered through another physician.

Case 528: Two dogs and pig bitten by dog same day as patient, developed disease about November 26.

Case 530: Because of location of bite, treatment was ordered immediately and dog held under observation. Dog was found not to be rabid, and treatment was canceled.

HISTORY OF ANIMALS FOUND POSITIVE FOR RABIES BY MICROSCOPICAL EXAMINATION

Case 444: Dog, family pet. Showed practically no symptoms of rabies previous to bite, except being a little peevish and irritable. Child was playing with animal at time bitten.

Case 445: Pet dog. Had heavy cold. Neighbors thought dog mad. Not known how infected. Ran a mild course and died.

Cases 446, 447, 448, 449: Dog viciously attacked four men, severely biting all of them. Escaped, but later found, killed, and head submitted for examination.

Case 450: Bitten by same dog as in case 446 but at different time.

Case 451: Bull terrier. Had at first loss of appetite and was gaunt and lazy, developing later an apparent pneumonia, paroxysms of whining as if in severe pain which became more frequent and more severe until death occurred.

Case 452: Dog bit child severely, as well as a number of dogs in neighborhood.

Cases 455, 460: Parties instructed to shut dog up, which had become vicious and wanted to snap and fight everything it came in contact with. However, owner killed dog and submitted its head for examination.

Cases 461, 462, 463: A bull puppy about eight months old bitten by dog passing through at night. Gradually developed pronounced symptoms of rabies. Killed and head sent to State Board of Health laboratory for examination.

Case 470: Cow died, and head sent to laboratory for examination.

Case 474: Pet cat. Head examined by microscope, but no trace of Negri bodies found, March 31. Rabbit was then inoculated, which died April 28, and upon microscopical examination, showed presence of Negri bodies.

Case: 475: Pet French poodle. Showed practically no symptoms.

Case 480: Dog. Was attacked several weeks before by dog at night. For several weeks before being killed would notice no one.

Cases 483, 484: Cat attacked patient in yard. Patient did not see cat, as it came up behind her. Cat was killed while biting and scratching patient.

Case 499: Dog. Barking, biting, wandering from home. Died of convulsions.

Case 500: Dog. Killed by police department.

Case 501: Dog. First symptoms, July 12; distemper; couldn't get up. Mad spasms of throat and legs; would not eat or drink; had cough. Dog killed.

Cases 502, 503: Dog. Snapping and biting other animals.

Case 506: Strange dog from Johnson station reached Hawthorn in morning and began traveling from one house to another biting dogs and at one house bit colored baby. Owner claims dog was seemingly in normal condition the evening before, ate supper heartily, but attacked cows and hogs that night, and then left home.

Cases 507, 508, 509, 510, 511: Symptoms not definite; dog acted suspiciously for several days, dying in convulsions soon after. Had been diseased with mange for some time, and got to snapping at all children coming in contact with. On fifth day after biting children, the dog drank water, had a fit and died.

Cases 516, 517, 518, 519, 520: Pointer, 19 months old. Began by acting restless, became cross, snapping everything near. No appetite, very restless. Dog killed and head sent to laboratory.

Case 521: Dog. Quiet and friendly until night before patient was bitten. Was in fight with several dogs in owners' yards that night and was not seen again until neighbor's child was bitten next day.

Case 523: Boy helping to catch dog, which was running about without muzzle, when dog bit him. Dog was playful and ate after biting child. Dog presented almost no symptoms of rabies.

Case 529: Dog. Foamed at mouth. Saliva and foam covered patient's hands while holding dog. Received scratch on palm of hand.

DEATHS FROM HYDROPHOBIA, 1914.

Ellaville, Madison County—N. H., aged negro, died November 8th. Walking to his home in country at night, and sat down by roadside to rest. Dog passed by and growled. He scolded it, and struck it with coat, when dog jumped at him and bit him over the eye. The wound readily healed and noth-

ing more was thought of the matter until November 6th, when patient had convulsion. These continued for forty-eight hours, resulting in death November 8th. (From Suwannee Democrat, November 12th issue.)

HYDROPHOBIA

Treatment Administered for its Prevention, by the State Board of Health, During 1914

DISTRIBUTION OF CASES BY COUNTIES AND TOWNS

County and Town	January	February	March	April	May	June	July	August	September	October	November	December	Total	
													Towns	Counties
ALACHUA	2					1		1	2	1			1	7
Gainesville								1	1				1	
Hawthorn								1					1	
Micanopy						1								
Newberry	2							1					2	
BAKER										1			3	
BAY														
BRADFORD														
BREVARD														
CALHOUN														
CITRUS														
CLAY						1								1
Green Cove Springs						1							1	
COLUMBIA														
DADE														
DE SOTO														
DUVAL	2	1	3		7	3	1	1						18
Fort George	1												1	
Jacksonville	1*	1	3		7	3	1						16	
South Jacksonville								1					1	
ESCAMBIA														
FRANKLIN														
GADSDEN								5					5	
Havana								5					5	
HAMILTON														
HERNANDO														
HILLSBOROUGH	1	6	2	5		1	1	2	1	3			2	22
Lithia														
Tampa	1	6	2	5		1	1	2	1	1			20	
HOLMES														
JACKSON				2										2
Greenwood				1									1	
Sneads				1									1	
JEFFERSON								1						1
Monticello														
LAFAYETTE								1					1	
LAKE														
LEE														

HYDROPHOBIA—Continued

Treatment Administered for its Prevention, by the State Board of Health, During 1914

DISTRIBUTION OF CASES BY COUNTIES AND TOWNS

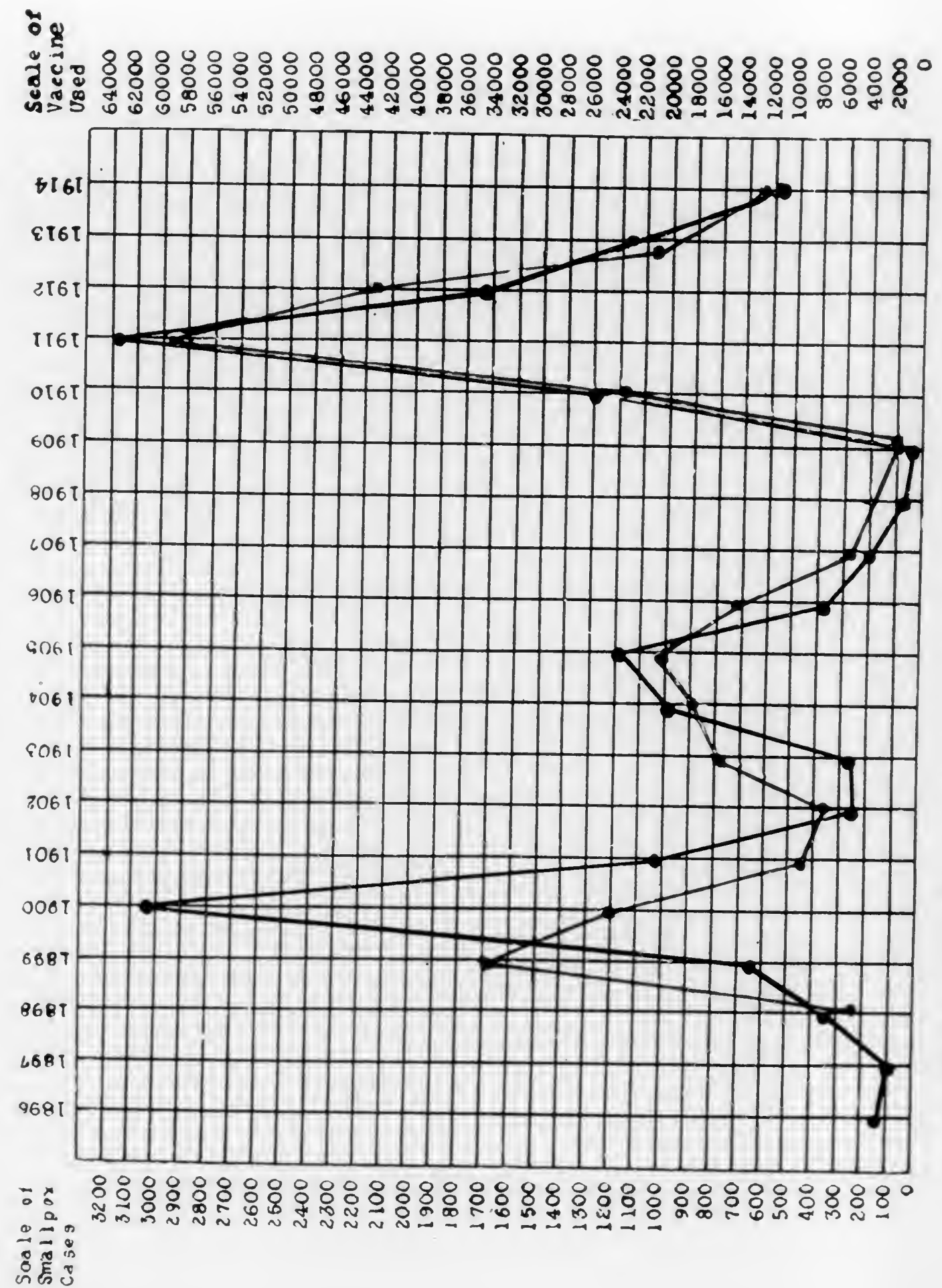
County and Town	January	February	March	April	May	June	July	August	September	October	November	December	Total	
													Towns	Counties
LEON														
LEVY							1						1	
Cedar Keys							1						1	
LIBERTY														
MADISON							1						1	
Madison							1						1	
MANATEE														
MARION		5				2		1					6	8
Ocala		5						1					2	
Oklawaha						2								
MONROE														
NASSAU														
ORANGE														
OSCEOLA														
PALM BEACH														
PASCO					1									1
Zephyrhills					1								1	
PINELLAS														
POLK							1						1	
Bartow							1						1	
PUTNAM														
SANTA ROSA														
SEMINOLE														
ST. JOHNS						1								2
St. Augustine						1					1†		2	
ST. LUCIE														
SUMTER														
SUWANEE	6	1	1	1	1		2	1		1				14
Dowling Park	6									1			7	
Live Oak		1	1	1				1					4	
Newburn					1								1	
O'Brien							2						2	
TAYLOR									5					5
Perry								5					5	
VOLUSIA														
WAKULLA														
WALTON														
WASHINGTON														
Totals	10	8	10	3	16	8	7	10	10	3	3	1	89	89

*Child could not be located when treatment arrived.

†Dog held under observation failed to develop rabies. Treatment not given.

REPORTED CASES OF SMALLPOX IN FLORIDA, 1914
(With Vaccinations Done*)

County	January	February	March	April	May	June	July	August	September	October	November	December	Total Cases	Vaccinations done
Alachua		33	34	6	2	1							76	1,219
Baker	1												1	20
Bay														10
Bradford	1		2	2			6						14	250
Brevard		1	1									3	2	50
Calhoun			31	1									32	70
Citrus		1		1	2								4	70
Clay				1	1								2	40
Columbia				2	6								8	90
Dade	2												2	140
DeSoto					1								1	3
Duval	20	4	13	14	6	2							59	904
Escambia		2	1	11	3				1				18	130
Franklin														
Gadsden		1								1			2	600
Hamilton														70
Hernando														
Hillsborough	1	19	8	18	14	13		1		4			78	1,220
Holmes														
Jackson				14			1						15	50
Jefferson											35	11	46	360
Lafayette														
Lake				6	2	1							9	130
Lee	3	2											5	210
Leon														160
Levy		2	2					1					5	480
Liberty														
Madison		1											1	
Manatee	1		1										2	160
Marion					2								3	302
Monroe	3							1					3	60
Nassau										2			2	25
Orange														20
Osceola		4	2	8									14	70
Palm Beach														60
Pasco														10
Pinellas						1							1	50
Polk			1		1								2	110
Putnam						1	1	1					3	72
Santa Rosa				6									6	20
Seminole			2										2	130
St. Johns	5												5	580
St. Lucie														40
Sumter														20
Suwanee			2						10					130
Taylor	1		4	1							6		6	170
Volusia		33	31	68	1	1		1					135	2,765



REPORTED CASES OF SMALLPOX IN FLORIDA, 1914—Contd.
(With Vaccinations Done*)

County	January	February	March	April	May	June	July	August	September	October	November	December	Total Cases	Vaccinations done
Wakulla
Walton	1	..	..	..	..	..	..	..	..	..	..	1	60
Washington	20
Vaccine points given to Assistants to State Health Officer for general use	1,497
Total	38	104	133	161	41	20	8	5	11	5	37	20	583	12,647

*Number of vaccinations is estimated by vaccine points distributed, which are given out in small quantities at a time, as may be needed for immediate use only. It is believed that nearly all vaccine points distributed are used, and that practically all vaccinations result in "takes."

STATUS OF WATER SUPPLY AND SEWAGE DISPOSAL IN
13 FLORIDA MUNICIPALITIES, 1914

WATER SUPPLY

Municipality	Source of Municipal Supply	Depth of Wells	Average Flow per Minute Gallons	Per Cent. Incorporated Area Supplied	Watershed	Treatment
Eustis	3 drilled deep non-flowing wells (within 4" of surface)	270' 6" 274' 6" 279' 6" Casing 115' to rock	Not known	75%	.....	.....
Gainesville	Drilled deep well and spring	365 ft. Casing 185 ft.	16,000	75%	Inhabited	.....
Green Cove Spgs.	2 drilled deep flowing wells cased	735 ft.	Not known	40%	.....	None
Kissimmee	2 drilled deep flowing wells 8" and 12" casings	650 ft. 379 ft. 418 ft.	Not known	60%	.....	.....
Lake City	Deep drilled non-flowing well	400 ft. Casing 110 ft.	500	50%	.....	.....
Leesburg	5 drilled deep non-flowing wells 3 in service, 2 extra, all cased	Average 100 ft. Casing 85-90 ft.	500	100%	.....	.....
Live Oak	2 deep drilled non-flowing cased wells (1 well condemned by State Board of Health, not used)	275 ft. 315 ft. Cased entire depth	1,000 1,200	.....	Inhabited Approx. Pop. 3000	.....
Ocala	2 deep drilled non-flowing cased wells 8" and 10" casings	1220 ft. 350 ft. Casings 300 ft. 250 ft.	274 258	60% (All White Pop.)	.....	Sedimentation
Orlando	Spring-fed lake $\frac{3}{4}$ -mile in circumference, 15 ft. average depth	.....	.....	.....	Inhabited Septic tanks used	.....
Palatka	3 drilled deep flowing cased wells	178 to 190 ft. each Casings 80 ft.	545	75%	Inhabited surface privies used	Softening by lime and soda ash
Pensacola	13 driven flowing cased wells	135 ft. Casings 135 ft.	950	95%	Inhabited sewer for sewage disposal	.....
Sanford	3 deep drilled flowing wells cased 8", 6", 3", to rock	265 ft. 275 ft. 140 ft.	Not known	50%	.....	.....
Tampa	20 deep drilled flowing cased wells From spring at times	165 ft. to 362 ft. Casings 52-259 ft.	150	75%	.....	Spring water treated with hypochloride of lime

STATUS OF WATER SUPPLY AND SEWAGE DISPOSAL IN
13 FLORIDA MUNICIPALITIES, 1914

SEWAGE DISPOSAL

Municipality	Method of Sewage Treatment	Year Installed	Final Disposition of Sewage	Per Cent. Incorporated Area Sewered
Eustis	None	.....	.....	.....
Gainesville	Septic Tanks	1907	Sweetwater Branch	60 to 65%
Green Cove Spgs.	Gravity system into St. Johns River	1911 Additions in 1913	St. Johns River	25% (Nearly half population of town)
Kissimmee	2 septic tanks	1910	Lake Tohopekaliga	About 50%
Lake City	Septic tanks	.....	Lake Hamburg	About 50%
Leesburg	None	.....	.....	.....
Live Oak	Septic tanks	1914	Effluent from tank runs into ground	.....
Ocala	None	.....	.....	.....
Orlando	5 large, 1 small Imhoff Tanks	1913-1914	Deep wells	70 %
Palatka	Gravity system to St. Johns River	1908	St. Johns River	75% of inhabited area
Pensacola	Two cast iron outfalls 20" and 24" in diameter) distance 3,000 ft. from shore into deep water. Outer end under 22 ft. water	1906-1908	Carried away by tidal flow in bay	60%
Sanford	Gravity system to Lake Monroe	1904 Later added to	Lake Monroe	Small percentage of incorporated area. Thickly settled part of town
Tampa	Imhoff Tanks Gravity system	1898 to present time	Doubtful	75%

REPORTS OF

DR. CHAS. WM. BARTLETT,
DR. C. W. D'ALEMBERTE,
DR. J. Y. PORTER, JR.,
DR. W. P. CRIGLER,
DR. J. E. TAYLOR,
DR. M. E. HECK,
DR. C. H. DOBBS,
DR. C. T. YOUNG,
Assistants to the State Health Officer.

DR. JAS. M. JACKSON,
DR. D. G. HUMPHREYS,
Agents of the State Board of Health.

REPORT OF DR. CHAS. W. BARTLETT

SOUTHWESTERN DISTRICT

Tampa, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—Upon looking back over the records in this office of the work done during the year 1914, for South Florida, I find that the general condition of health has been good.

The main two diseases in the counties of South Florida have been typhoid fever and diphtheria; and in a general way, the nuisances investigated and abated have been of the same character, open closets and fly infection having played the leading part. Another source of many complaints has been the unsanitary condition of filthy-kept butcher pens and manure piles from stables. The unsanitary condition of private premises has also been reported from time to time but as a general rule, the condition has been more often due to animosity of neighbors than really a nuisance in itself. In some of the smaller towns and outskirts of large cities, the non-compliance with the screening law by restaurants and hotel keepers has been always investigated and abated. Another law coming under the supervision of the State Board of Health, often disregarded, is the keeping and herding of hogs within incorporated towns or cities, and this has always been ended immediately upon notification to this office, due to the fact that the statute concerning this matter is very explicit. Information often requested by citizens from different sections of South Florida on hookworm infection, malaria, and water infection, has always been cheerfully given in every case; and samples of water supposed to be infected have always been collected and examination made. Requests have also been made often to this office by natives of this section of Florida now residing in New York, for birth certificates needed for school attendance, and same have been obtained and forwarded to them whenever possible.

During the year we find that in incorporated towns the sanitary condition has been good, but in all villages that we have visited and in unincorporated towns, I find that there was no provision whatsoever for the collection of night soil and garbage.

As the work has progressed through the year, a special and complete report has been made to the State Health Officer on each and every investigation, giving full detail of the work done, as well as to municipal and federal authorities whenever requested.

Before going into detail by county, it must be borne in mind that Hillsborough being the largest county in population, and this office being in Tampa, the center of population, we are in closer contact with the Tampa physicians and the surrounding districts; therefore, the report for this county is of course more thorough and complete. The fact is, that the number of scarlet fever, diphtheria and typhoid fever cases reported by the physicians, covered nearly every case that existed during the year in this section, which condition of course does not prevail in the other counties.

At the close of the year 1913, we had two cases of smallpox at the isolation hospital, and during the year 1914, we had altogether sixty-five cases of smallpox, which were divided as follows: The highest number of cases prevailed during April and May, there being sixteen cases in April and fourteen cases in May. We had four months of the year without a single case of smallpox, against two of the previous year. The cases by months occurred as follows: January, 7; February, 12; March, 7; April, 16; May, 14; June, 6; July, 1; October, 2. Out of these 65 cases, nearly all were from the city of Tampa; one case from Plant City; one case from Clearwater, Pinellas County, although treated at the hospital here; three cases came from Valrico, and one case from Jacksonville.

In connection with smallpox, vaccination for the prevention of same has been carried on by this office throughout the year.

Diphtheria has continued throughout the year, and in spite of all precautions, such as fumigation, reporting of cases to school teachers, keeping from school infected children, etc., the number of cases has been very large. We have received reports

Hillsborough
County
Smallpox.

Diphtheria.

of diphtheria cases from almost every section of the county. In West Tampa and Tampa we have no less than 167 cases, the highest month being December, forty cases, and the lowest number occurring in July and August, two cases each month. I attribute this large number of diphtheria cases as partly due to the reporting of all cases by the physician in attendance, this year.

Now that our record for one year has been completed, it has been proved that diphtheria is endemic in Tampa. The death rate is nine for the whole year, of which September had the largest rate, three, out of only twelve cases reported during the month. On the other hand in the month of December with forty cases of diphtheria reported, there was only one death.

During the winter months, that is, from January to May, we had altogether ten cases of scarlet fever, of which number, three were out of the city limits, in a close vicinity of Tampa. From other sections of the county no cases were reported, and although cases in town developed in the thickly populated parts, there was no spreading of the cases. In each case the child was isolated in his or her home, and the other children living in the same house were removed to another building. All cases were kept isolated for eight weeks, and were not allowed to report to school until all signs of the disease had stopped.

Typhoid fever prevailed during the whole year, and we had a total of 185 cases. From the month of January up to July, we had the largest number of cases, as follows: January 30, February 19, March 30, April 28, May 12, June 11, and July 12. Then there came a drop in the number of cases with a slight raise again in December. There were only six cases in August, four in September, nine in October, and five in November, increasing to nineteen in December.

It is well at this point to call attention to the fact that as soon as fresh vegetables disappeared from the market, that is, lettuce and celery, there is a considerable decrease in the number of typhoid cases, which increased again with the introduction of fresh vegetables into the market.

All cases of typhoid fever have been investigated as far as the residence and surroundings and source of food supply are

Scarlet Fever.

Typhoid Fever.

concerned. Each and every case has been marked with a small flag in the map of the city which is kept for this purpose in the office; and here we are able to observe another remarkable coincidence, and that is that in West Tampa, where there is practically no connection with sewerage, the proportion of cases according to population is less than in Tampa, there being only thirteen cases for the whole year, while in Hyde Park we find that in spite of having all the homes screened and connected with sewerage, there have been no less than twenty cases. Upon investigation, the only difference I find in the habits of the people living on both sides of the river, is that in West Tampa very few vegetables are consumed by the people and absolutely no raw milk is taken by the majority of the residents there. The fact is that in not a single case investigated by me was raw milk taken; those not using condensed milk, had their milk supply boiled.

Another fact noticed is that there were no soda water fountains in that section until the month of December, when a new, modern, up-to-date soda water fountain was opened in the corner of Howard and Main Streets, and coincident with the opening of the soda water fountain and the consumption of raw milk, we find that West Tampa had during the month of December four cases of typhoid fever, out of the thirteen reported for the year 1914 in West Tampa. Of course, one single month is too early to reach any conclusion, but we shall watch with care these developments.

Out of the 185 cases investigated we find that 32 patients lived in screened houses; and out of these 32 cases only two eat outside, while 11 of the patients contracted the disease while traveling or outside of their screened homes, which leaves only 19 cases having contracted typhoid fever in spite of living in screened houses. Three of these last 19 cases had open closets within 500 feet from their houses; and four other cases that had to take raw milk out of their homes. We must also bear in mind that a large number of people believe that by simply screening their houses, they are thoroughly protected from flies, and therefore they fail to destroy the flies that get into their premises; so that really instead of counting by screened houses, we should count by fly-proof houses which

undoubtedly would bring the number of those protected from flies to a very small figure. It might as well be mentioned here that although I laid stress on the fact that the people of West Tampa were not using raw milk, we also find that those cases using raw milk in Tampa, had not given us the name of any given dairy often enough, to make me believe that the milk taken was the source of infection. And in soda water fountains, where raw milk is taken, it should not be regarded as the only source of infection, as there is a possibility that infection may also be transmitted by the lack of cleanliness in the glasses furnished the customers. At the same time on two occasions when water has been suspected of contamination, a sample of the water supply has been collected and examination carefully made, and no trace whatsoever found of infection in the water.

Two new cases of leprosy were found during the year 1914. They were all advised to be kept away from public places, and not to come in contact with other people.

Miscellaneous.

There were also three cases of poliomyelitis or infantile paralysis. These cases occurred among the Italian colony. One case in the western part of the city of Tampa known as Ellinger; another case on the southwestern part, and the third case in the northeastern section of the city. There was no connection between these families, and although there were several children in each home, those mentioned were the only cases to develop.

There were forty-one cases of chickenpox reported during the year 1914 and they were all investigated for differential diagnosis from smallpox.

Only one case of pellagra was reported from the county throughout the year.

During the summer months intestinal infection among children prevailed, but the acute milk infection or cholera infantum was not reported, and I failed to see a single case during the year, credit for which condition should be given to the inspec-

tion of dairies and milk examination carried out by the Pure Food Department.

Polk County.

The condition of health in Polk County has been good for the year 1914. We had several cases of diphtheria reported from Lakeland and Bartow. There were also a few cases of typhoid fever reported. A nuisance was reported regarding the unsanitary condition of a dumping ground used by the city of Lakeland during the early part of the year. This was immediately corrected by the Mayor of the city upon notification. Also open closets surrounding public schools of which attention was called to the Commissioner of School Board. Examination of the ice plant of Lakeland, and investigation of the sewerage system of Bartow were also made.

Pinellas County.

Nuisances were reported on several occasions during the year from this County, especially at Tarpon Springs, due to the lack of sewerage connection of the Greek settlement and butcher pens in filthy condition both at St. Petersburg and Tarpon Springs. Several cases of typhoid fever were reported also from St. Petersburg, Tarpon Springs and Clearwater. Diphtheria also prevailed in the County during the year.

Manatee County.

There were several cases of smallpox during the early part of the year reported from Palmetto, and epidemic of amoebic dysentery at Ellenton and Terra Ceia during the latter part of the year. Otherwise, the condition of health was most excellent.

DeSoto County.

The health condition of DeSoto County has been good with the exception of typhoid fever which prevailed at Wauchula, Arcadia and quite an epidemic, considering the number of people, at Fort Ogden. There were also a few cases of diphtheria reported from different sections of this county during the year.

Lee County.

One case of smallpox was introduced at Fort Myers from New York, and one case developed there. Several cases of typhoid fever were reported from different sections of this county. Otherwise the condition of this county was exceedingly good.

Investigations of communicable diseases and sanitary nuisances performed outside of Tampa during the year were as follows:

Date	Place	County	Occupation
Jan. 4	Wimauma	Hillsborough	Smallpox
Jan. 20	Fort Myers	Lee	Smallpox
Jan. 31	Valrico	Hillsborough	Smallpox
Feb. 6	Balm	Hillsborough	Smallpox
Feb. 28	Lakeland	Polk	Ice factory—collection water samples for examination
Mar. 27	Palmetto	Manatee	Smallpox
Mar. 29	Plant City	Hillsborough	Smallpox
Apr. 3	Frost Proof	Polk	Smallpox
Apr. 14	Plant City	Hillsborough	Smallpox
Apr. 15	Tarpon Springs	Pinellas	Typhoid fever
Apr. 27	Frost Proof	Polk	Typhoid fever
Apr. 27	Avon Park	DeSoto	Typhoid fever
Apr. 29	Haines City	Polk	Smallpox and public nuisance
Apr. 30	St. Petersburg	Pinellas	Open drain
May 25	St. Petersburg	Pinellas	Slaughter pen
June 4	Bartow	Polk	Sewage
July 14	Tarpon Springs	Pinellas	Oyster beds
Aug. 17	Tarpon Springs	Pinellas	Sanitary nuisance
Aug. 17	Clearwater	Pinellas	Sanitary nuisance
Sept. 11	Tarpon Springs	Pinellas	Sewerage—sanitary nuisance, vital statistics
Oct. 2	St. Petersburg	Pinellas	Underground drainage
Oct. 5	Plant City	Hillsborough	Diphtheria
Oct. 5	Knights Station	Hillsborough	Diphtheria
Oct. 20	Tarpon Springs	Pinellas	Sanitary nuisance—vital statistics
Oct. 22	Dunedin	Pinellas	Sanitary nuisance
Nov. 1	Plant City	Hillsborough	Scarlet Fever
Nov. 3	St. Petersburg	Pinellas	Cesspool nuisance
Nov. 11	Ellenton	Manatee	Alleged epidemic
Nov. 11	Bradentown	Manatee	Interview with physicians
Nov. 11	Manatee	Manatee	Interview with physicians
Nov. 23	Tarpon Springs	Pinellas	Official trip with State Health Officer
Nov. 23	Clearwater	Pinellas	Official trip with State Health Officer
Nov. 23	Dunedin	Pinellas	Official trip with State Health Officer

REPORT OF INVESTIGATIONS MADE DURING THE YEAR 1914
IN TAMPA.

January 1—Smallpox case Florida Avenue investigated and patient removed to Isolation Hospital. Twelve vaccinations.

January 6—Death certificate of a German subject who was accidentally killed at Port Tampa obtained from undertaker upon request.

January 8—Smallpox case at Isolation Hospital which came from Clearwater investigated. Nine vaccinations.

January 13—Interviewed Tampa physicians regarding their compliance with the law reporting contagious diseases. Six vaccinations.

January 14—Interview with several of the Tampa physicians regarding their lack of report on typhoid fever cases. Two vaccinations.

January 18—Smallpox case Estelle Street investigated and removed to Isolation Hospital. Sixteen vaccinations.

January 22—Smallpox case Zack Street removed to Hospital.

January 26—Investigation of unsanitary condition private residence. This matter referred to city of Tampa.

January 27—Typhoid fever condition in Tampa investigated on account of the large number of cases for the week ending January 13, 1914. Report made of same.

January 30—Smallpox case inspected and removed to hospital at Tampa, coming from Valrico, Florida. One more case on this date from Valrico.

January 30—Another case of smallpox coming from Valrico removed to hospital.

February 1—Smallpox case at North East Street and West 11th Ave. investigated and removed to hospital. Two more cases on this same date from same address investigated. Eight vaccinations.

February 2, 3, 4, 5, 6—Shell piles inspected at the Garrison, Tampa, Florida, upon request made to abate nuisance. These cases brought before the police court by Chief of the Sanitary Department, to whom the case was referred. Nineteen vaccinations.

February 7—Smallpox case from City Stockade removed to hospital. Another case from 17th Ave. and LaSalle St., West Tampa removed to hospital on this date.

February 8—Smallpox case investigated Scott Street.

February 9—At 15th Street another case inspected and removed to hospital.

February 9—Four more cases of smallpox in Tampa removed to hospital.

February 10—Smallpox case, Jefferson Street investigated and removed to hospital. Twenty-two vaccinations made.

February 23—Smallpox case, Maryland Avenue removed to hospital.

March 6—Investigation of public nuisance on 25th Street, Tampa, Fla.

March 7—Stable inspected upon complaint of neighbors. Report made to City Board of Health.

March 9—Smallpox case, 5th Avenue removed to hospital.

March 11—Smallpox case, Gilchrist Street removed to hospital.

March 13—Investigation of smallpox case at Port Tampa City.

March 16—Unsanitary condition reported on Morgan Street; investigation made.

March 17—Interview with Mayor of Tampa regarding the hydrophobic condition and the prevention of its spreading. Also with Mayor of West Tampa on same subject. Three vaccinations made.

March 21—Smallpox case, 6th Avenue investigated.

March 26—Eight vaccinations made.

March 27—Smallpox case, 6th Avenue investigated.

March 27—Smallpox case, Tyler Street investigated and patient removed to hospital. Twenty-three vaccinations.

March 28—Unsanitary condition at the Boulevard investigated.

March 28—At the request of Principal of the Hyde Park School, the homes of nine pupils were inspected.

April 6—Case of smallpox investigated Washington Street.

April 10—Smallpox case Bell Street investigated and removed to hospital.

April 11—Smallpox case at hospital inspected. Came from Plant City.

April 12—17th Street smallpox case found and removed to hospital.

April 15—Cass Street smallpox case found and removed to hospital.

April 16—Twelve vaccinations made.

April 16—Smallpox case Green Street investigated and case removed to hospital.

April 17—Pierce Street smallpox case found and investigated.

April 18—Krause Street smallpox case reported and investigated.

April 19—Smallpox case Franklin Street removed to hospital.

April 20—Smallpox case Morgan Street removed to hospital.

April 23—Scott Street, case of smallpox investigated.

April 23—Another smallpox case found at same address.

May 1—Case from Morgan Street removed to hospital.

May 4—Case of smallpox on Tampa Street; removed to hospital.

May 6—Investigation at Ybor City of financial condition of patient who tried to obtain free Pasteur treatment found to belong to the Circulo Cubano Society and said Society made to pay for treatment.

May 8—Case of smallpox S. Nebraska Avenue investigated.

May 10—Two cases of smallpox removed to hospital from Scott Street.

May 14—Case from 21st Street removed to hospital.

May 13, 14, 15—Investigation of condition of typhoid fever in connection with lack of consumption of fresh vegetables. Twenty-two vaccinations made.

May 15—Case of smallpox Zack Street investigated.

May 17—Case of smallpox India Street removed to hospital.

May 18—Case on Palmetto Alley investigated.

May 19—Five vaccinations made.

May 21—Investigation of Sanitarium premises due to a complaint received regarding the unsanitary condition.

May 28—Inspection of excavation due to sewage at suggestion of local newspaper. Three vaccinations.

May 29—Investigation Kay Street for differential diagnosis between chickenpox and smallpox.

May 29—Three other smallpox cases at 20th, Nebraska and Lemon Streets, removed to hospital.

June 2—Inspection of City Stockade at request of State Health Officer. Report made of same.

June 4—Two cases of smallpox at City Stockade and Highland Avenue investigated and removed to hospital. Twenty-four vaccinations made.

June 13—Called on for differential diagnosis in a case of smallpox, Whiting Street, Tampa. Six vaccinations made.

June 15—Smallpox case Nebraska Avenue removed to hospital.

June 18—Investigation of riot in Isolation Hospital caused by negro patient and efforts made to arrest him. Whooping cough cases in Tampa and West Tampa investigated.

June 19—Ten smallpox vaccinations.

July 10—Smallpox case Jefferson Street inspected and removed to hospital. Seven vaccinations made.

July 13—Leprosy case inspected, and report of same made.

July 13—Twenty vaccinations.

July 15—Investigation of unsanitary condition at Grand Central Avenue between Oregon and Orleans Streets. Investigation of pond at the request of Mr. MacFarlane at Tampa Water Works, for drainage purposes.

July 19—Two vaccinations.

July 20—Eleven vaccinations.

July 20—Interview with the wholesale houses of Tampa regarding freight cars coming direct from New Orleans.

July 29—Steamers from New Orleans inspected by request of Mayor MacKay.

July 30—Twelve vaccinations.

July 30—Interview with Mayor MacKay on extermination of rats for prevention of bubonic plague. Three vaccinations on this date.

August 5—Investigation of smallpox at "Scrub" and removal of cases to hospital. Two vaccinations made.

August 6—Eleven people vaccinated.

August 13—Investigation of freight cars arriving without posters.

August 14—Investigation of unsanitary cellar at private residence. Inspection of cars going from Tampa to Port Tampa at the A. C. L. Railroad. Thirty-six people vaccinated.

August 19—Interview with Mayor MacKay on extermination of rats.

August 19—Freight cars without certificate inspected.

September 20—Six vaccinations.

September 22—Investigation of diphtheria condition in Tampa at the request of Mayor MacKay. Cases surrounding Michigan Avenue School. Report of same made. Eight vaccinations made.

September 25—Tuberculosis infection in family inspected. Three people vaccinated.

September 28—Interview to obtain list of Eclectic physicians, for State Board of Health. Five vaccinations.

October 1—Inspection of Isolation Hospital.

October 6—Conference with committee St. Petersburg citizens regarding slaughter house nuisance.

October 7—Inspection smallpox case on Estelle Street, and investigation diphtheria case reported by county physician.

October 8—Visit to Isolation Hospital.

October 10—Conference with Secretary of Examining Board concerning list of Eclectic physicians.

October 8—Investigation case smallpox on Estelle Street. Diagnosis made.

October 12—Visit to Isolation Hospital.

October 14—Visit to Isolation Hospital.

October 15—Visit to Isolation Hospital.

October 17—Visit case of smallpox Marion Street. Diagnosis made.

October 18—Investigation case smallpox at Ballast Point.

October 19—Visit to Isolation Hospital.

October 21—Visit to Isolation Hospital.

October 23—Reinspection of underground water contamination at Robles Point.

October 24—Visit to Isolation Hospital, and conference with city authorities regarding drainage wells.

October 25—Conference with City Council and Mayor on diphtheria situation. Conference regarding drainage wells.

October 27—Conference with school commissioners on diphtheria situation Michigan Avenue school. Visit to hospital.

November 5—Inspection of Isolation Hospital.

November 9—Advice with St. Petersburg City Engineer on muddy condition of water in reservoir.

November 10—Investigation of exhumation of body at Woodlawn Cemetery for identification, and issue of permit.

November 10-17—Examination of rats at Tampa laboratory.

November 13—Investigation of nuisance on Tampa Street. Matter taken up with city sanitary department.

November 14—Visit to Isolation Hospital.

November 18—Conference with Tampa Times on Rat Guards.

November 19—With State Health Officer.

November 15-19—Statement to U. S. Port Collector. Twelve notifications to school teachers of diphtheria cases, by mail.

December 1-15—Routine work at office. Report of infectious and contagious diseases for bill of health of out-going vessels, to custom house officer.

December 5, 8, 9, 11, 15, 17, 30—Report of sixteen cases of diphtheria to teachers.

December 27—Conference with councilmen on ordinances for rat guards on in-coming steamers.

December 17—Investigation typhoid fever at Arlington Heights and inspection of Purity Springs furnishing water to Arlington Heights and other sections surrounding Tampa in connection with typhoid fever. Collection of water from said Springs.

December 14—Investigation of water supply Hyde Park Avenue. Collection of water samples.

December 26—Investigation water supply at Buffalo Avenue and surrounding neighborhood at report of outbreak of typhoid fever. Collection of water from two different sources.

December 30—Inspection of dairy premises based on public nuisance Act at request of neighboring citizens.

December 12-26—Investigation reported cases smallpox 14th and 12th Avenues.

Regular daily inspections by sanitary partolman made during the year.

Respectfully submitted,

CHAS. WM. BARTLETT,

Assistant to the State Health Officer.

REPORT OF DR. C. W. D'ALEMBERTE

WESTERN DISTRICT

Pensacola, Fla., Jan. 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—The number of cases of communicable diseases reported to this office from January 1, 1914, to December 31, 1914, was as follows:

Smallpox	19
Tuberculosis	51
Typhoid Fever.....	56
Diphtheria	34*
Scarlet Fever.....	14
Measles	1

*Out of total cases of diphtheria, 18 were in and around Century.

The number of fumigations by Sanitary Patrolman, from January 1, 1914 to December 31, 1914, was 97.

The number of transit permits, Form 233, issued from January 1, 1914, to December 31, 1914, was 85.

On March 20th, I visited Marianna to inspect conditions of sewerage at the Florida Reform School. The sewerage at that time was being emptied into a vacant lot about one hundred yards from one of the main buildings. This has since been corrected and is now carried off by pipes to sink hole several thousand feet away from the premises.

April 10th, I visited Garnier's Fla., where there were several cases of smallpox at Johnson's still. All persons that had been exposed were vaccinated and no further cases developed.

July 21st I was ordered to New Orleans, La., by the State Health Officer, to report to Dr. W. C. Rucker, Assistant Surgeon-General of the United States Public Health Service, for the purpose of studying the methods employed by this Government in handling bubonic plague. By Dr. Rucker's permission I was allowed to participate in the work commencing with the trapping of the rats to following the complete laboratory pro-

cedure to determine whether they were infected with the bacillus pestis or not.

October 2d was detailed to Century, Fla., to assist the physicians at that place in stamping out an epidemic of diphtheria.

November 19th, I was detailed by the State Health Officer to visit Graceville, Fla., to assist the authorities of that town in stamping out diphtheria.

November 27th, I visited Chipley, Fla., to consult with the physicians of that place regarding a case of diphtheria.

November 27th, I visited Marianna, to confer with the Registrar of Vital Statistics.

During the year I have superintended the disinfection of numerous quarters that have been occupied by persons having contagious diseases. Have inspected in company with the attending physician cases of a suspicious nature and supervised the inspection of freight cars coming into this city from New Orleans, La., to determine if any rodents were harbored therein.

It has been my pleasure and privilege to assist in a small measure the educational work of the State Board of Health by giving talks to various organizations upon health matters.

Respectfully submitted,

C. W. D'ALEMBERTE,
Assistant to the State Health Officer.

REPORT OF DR. JOSEPH Y. PORTER, JR.

SOUTH TROPIC DISTRICT.

Key West, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—Health conditions in the South Tropic District for the past year have been excellent; very few of the preventable diseases have occurred and in general the community has experienced one of the most healthful periods of its existence.

This has been due to two factors: first, the screening laws have been rigidly enforced, and secondly, a daily collection of garbage. The latter plays a secondary role when it is considered that all garbage is, as a rule, deposited into coverless cans, and that flies, which are chiefly to be considered in the propagation of intestinal diseases, have been as plentiful in number during 1914, as in former years. It is felt that a further extension of the work against the fly such as a proper regulation of all horse and mule stables, with all toilets made fly proof, will result in a greater decrease in the above mentioned diseases. These matters have been repeatedly taken up with individual members of the City Council, also, the Council itself, and it is hoped that shortly they may be enacted into law.

The question of an incinerator was also brought to the attention of the Council, and a committee was appointed, which, after inspecting and witnessing the operation of all types in the different cities between Key West and New York, in a report recommended the purchase of a Nye Odorless Incinerator; the matter is still under advisement, and it is hoped that, within a short period, at least before the "typhoid season" starts, it will be installed and in operation. At present garbage is deposited on the outskirts of the city and an attempt made to burn it; in dry weather this is fairly successful, but in the rainy season it is a physical impossibility. The Council has been repeatedly informed that this disposal of garbage is

in violation of Rule 47 of the Rules and Regulations of the State Board of Health.

During the past year an attempt was made to collect morbidity statistics; printed post cards were furnished all physicians; these post cards were so arranged that all necessary to do was for the physician to fill in the name and address with other such sociological data as race, sex, etc., and check the disease from the list of printed diseases, and mail to this office. Although assured of the support of each individual physician, the number of reports became smaller and smaller, and finally ceased. Another attempt is to be made shortly along other lines, with greater promises of success.

The District outside of Key West was visited last May. The several railroad camps, and other settlements along the Florida Keys were found to be in good condition; the railroad camps in particular were in a splendid sanitary condition, all kitchens, dining rooms and sleeping quarters being thoroughly screened, and both buildings and surroundings scrupulously clean; nearly all toilets were placed over the water and thus there was a minimum chance of spreading intestinal diseases. In settlements there were primitive toilets, but no hookworm infection was observed, possibly due to the lack of sandy soil. Places visited were Big Coppitt, Chase, Little Pine Key, Boot Key Camp, Marathon, Spanish Harbor Camp, and Bahia Honda.

That there has been a marked decrease in this disease is not to be questioned. Owing to the lack of morbidity statistics, commented upon elsewhere, it is impossible to state the exact prevalence of this disease, but talking the matter over with physicians, all agree that typhoid fever has prevailed to a lesser degree than heretofore. Widal examination, and, in a few cases, blood cultures have been performed for the physicians, but as a rule, they do not seem inclined to avail themselves of the aids to diagnoses. This office has also stated that the State Board of Health is prepared to administer the typhoid vaccine free to the indigent, but as yet, not one person has availed himself of this opportunity. With the making of all toilets fly proof I look for the typhoid rate to be still smaller,

Typhoid Fever.

for it is firmly believed that outside of a few contact cases the disease here is mainly fly-borne.

Smallpox.

Early in January a suspicious case was reported; after two days' observation the patient was released from isolation, the diagnosis not being confirmed. During the latter part of the same month smallpox developed in a person who had but a few days returned from Mexico. The diagnosis was promptly confirmed; as the patient was removed from a steamer whose destination was New York City, the Health Officer there was notified by wire of the facts in the case.

All members of the patients' family were vaccinated, with the exception of one young boy, who refused vaccination, violated isolation instructions, and left the house. As this boy had been in the same room with the patient prior to the rash coming out, and was also said to have slept with him, a warrant was obtained for his arrest, and as the County Commissioners placed a small reward for his capture, he was promptly arrested. A short talk convinced him of the error of his way and he submitted to vaccination and later revaccination, which revaccination gave a splendid take. The patient's mother later developed a confluent case of smallpox and made an uneventful recovery. Since then there have been no further cases. In this connection, I might add that smallpox vaccinations have in a small way been going steadily on; the School Board has been urged to adopt a compulsory vaccination rule, for admittance into the public schools of this county, but up to the present they have not seen fit to follow this advice. As a result there are growing up a large number of unprotected individuals, who will be "fertile ground" should we be ever unfortunate enough to have a mild unrecognized case of smallpox in the community.

Diphtheria.

There have been sporadic cases during the entire year, developing at no time into epidemic proportions. All physicians have been repeatedly urged to submit throat smears to this office, especially in mild sore throats, for it is only in this way that we can hope to control the disease. During April diphtheria developing in two school children, swabs and cultures were made in all suspicious cases in the school room, in an effort to determine the source, all proving negative.

There has also been a decrease in these diseases, due no doubt to the same causes as to the decrease in typhoid. A milk ordinance is now being drawn up to be presented to the Council and it is hoped that they will see fit to speedily pass it.

Infantile
Intestinal
Diseases.

Beginning with July anti-plague measures have steadily proceeded. At my suggestion the city and county have placed a bounty of ten cents on each rat delivered to the laboratory here. Up to the present there have been examined 2,047, all negative for plague. Rat proofing laws have been urged as also the employment of a competent rat catcher, for so soon as the fear and interest in plague began to die down, the daily rat catch dropped to an average of from two to ten. Guinea pig sentinels have been maintained in places along the water front and in houses that receive goods direct from Cuba. When first placed, a few deaths resulted, none suspicious of plague. During October, New Orleans was visited for a period of ten days, and the plague situation and anti-plague measures were studied from every point of view. The experience gained while working in the U. S. P. H. S. Laboratory, under Dr. C. L. Williams, was invaluable, and I am indebted to him and several other officers of this Service for many courtesies received.

Plague.

The campaign against the fly by means of "fly exhibits" and fly posters has been persistently kept up, and I think is beginning to bear fruit, judging by the interest the average person now takes in this subject.

The public schools have been inspected. The School Board has been urged to employ a "school nurse," who in addition to her regular duties as such, can make simple tests for the acuteness of vision and hearing.

The matter of a dipping vat has been brought to the attention of the dairymen looking toward getting the island tick free. When this is a fact, and the island released from quarantine, blooded animals can be then imported and the milking strain of the entire herd raised.

The mosquitoes on the island of Key West have been frequently examined during the past year. No *Anopheles* have been found.

In numerous examination of feces, no native hookworm infection has been found. Occasionally, a few imported cases have been encountered. The tricocephalus dispar has been found to be a very common infection in children, almost fifty per cent. of children showing the ova.

In my capacity as local surgeon for the Florida East Coast Railway, I have recommended that all employees under forty, excepting those who have had typhoid, be required to take the typhoid vaccine.

The work of the Sanitary Patrolman has been supervised and systematized.

Respectfully submitted,

JOSEPH Y. PORTER, JR.,
Assistant to the State Health Officer.

REPORT OF DR. W. P. CRIGLER

SOUTH CENTRAL DISTRICT.

Ocala, Fla., December 31, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I have the honor to submit herewith my report of the general health conditions in my district, during the year 1914.

The district comprises the counties of Marion, Lake, Sumter, Citrus, Hernando, Seminole, Orange, Osceola and Pasco.

The general health conditions have been good, with a slight improvement over those of last year.

No epidemics of a serious nature occurred.

Typhoid fever was the most serious disease to contend with, and, in some cases caused considerable alarm. In most all cases the infection was fly-borne.

The open surface closet is a great menace to the health of the state and until the people are educated concerning the necessity of fly-proof closets, and septic tanks, the number of cases will increase yearly. Work has been done along this line by talks with the city authorities and private citizens, advising them of the benefits to be obtained by proper sewage disposal and screening of residences. A number of cases of typhoid existed in the cities of Ocala and Orlando during the spring and summer, but at no time reached a serious stage. In these outbreaks the fly was the carrier of the infection.

Sporadic cases existed throughout the district, in the rural as well as the urban parts.

Typhoid vaccine as a prophylactic was advised and a great many people were protected with it.

Pellagra is causing considerable anxiety, owing to its increase in the district. Cases are reported by all the physicians, but at no place are there a great number of cases.

I found seven cases in one locality in Sumter County and after investigating their etiology, found that the dietary theory was upheld in all cases. The absence of a full diet of animal and leguminous proteids was noted in these cases.

As the treatment and prevention of this disease is now better known we will be in a better position to fight it.

Malaria is still prevalent but not to such an extent as formerly, becoming less and less every year. The people are becoming better educated to the mosquito as the cause of the disease, and are using means to protect themselves, both by screening their houses and doing away with the breeding places of the mosquito.

Two cases of Malaria Haemoglobinuria were reported from Crystal River; both cases terminated fatally.

Hookworm disease prevails as usual in the rural parts, but in the number of positive cases existing, few are so reduced in health as to seek medical attention.

Here again we fall back on the open surface closet as the cause in keeping up this disease, and until they are done away with, the treatment of sufferers is of little avail as they readily become reinfected.

The number of smallpox cases reported from this territory was less than last year, reaching at no time an epidemic. Eight cases occurred in a construction gang in the employ of the Atlantic Coast Line Railroad Company. Two cases were at first reported, but by the close association of the crew in the same car, six others contracted the disease in spite of early vaccination. These cases were isolated and no others followed.

A traveling vaudeville actor was put off the train by a conductor at Williston last February, suffering with smallpox. He was placed in my care for treatment. I had him isolated in a tent outside the city limits and all expenses were paid by the State Board of Health, as he was indigent.

No other cases followed this one. A small outbreak at a sawmill near Umatilla was difficult to handle, owing to the great opposition of the manager to vaccination.

A number of the town inhabitants were vaccinated and the outbreak was confined to the mill.

The smallpox cases seen by me this year were all mild and no deaths occurred. It isn't the severe cases that cause the spread of the disease, but the mild and undiagnosed ones, which are not confined to the house nor have medical aid, and are thus free to wander around and spread the infection.

Smallpox is made endemic by the negro who has no fear of the disease, but is in horror of vaccination. They would far rather have the "bumps" as they term smallpox, than be vaccinated; and very ingenious schemes have to be devised to get them vaccinated.

The communicable diseases of childhood occur in the same proportion as usual, but great good has been done in some localities in their prevention by the medical inspection of schools.

A child with a sore throat, cough, coryza or an eruption is sent home and isolated, and, as these are in great part the first symptoms and most contagious stage of the exanthemata, great good is done in preventing their spread.

Diphtheria occurred in isolated cases in both town and country, but no serious outbreaks resulted. An epidemic at an orphanage at Enterprise was prevented by the administration of immunizing doses of antitoxin to all the inmates. Only the three original cases occurred.

No epidemic of dengue fever existed this year as is usual in some localities.

No serious outbreaks of measles, scarlet fever and chickenpox were reported.

The sanitary conditions of the towns are improving, but the municipal authorities are hard to wake up on this subject. They generally wait until an epidemic of some kind breaks out before starting to clean up.

Ocala has made great strides in matters pertaining to public health and sanitation. A new health ordinance was passed creating a new sanitary code and the office of city physician, whose duties amongst many others, include the daily examination of school children, inspection of dairies, examination of milk and its products; also inspection of meat markets and bakeries. Already good results have been attained, as shown by the absence of communicable diseases of childhood during the school term. Only three cases of chickenpox were reported.

Ocala has under consideration a new sewerage system, which is greatly needed. The majority of the sewage is disposed of by the sewage well system.

Ocala has passed the model vital statistics ordinance and is now in position to get full returns of births and deaths.

Orlando has this year completed a new sewerage system of the Imhoff type. The city is also considering the passage of a new health ordinance, with a provision for the appointment of a city physician. The city is in a good sanitary condition.

Sanford has a good sewerage system and an excellent water supply and is in a good sanitary condition. The health ordinance is good and ably looked after by a city physician.

Kissimmee has lately increased the water supply, with a new well and now has an abundance of good water. The town is well sewered and is in a good sanitary condition.

In the small incorporated towns and those not incorporated, the greatest need is the sewage disposal system and screening of houses. In most places the open surface closet prevails and is their greatest problem of sanitation.

The towns that have municipal water supply have good water free from contamination, as in all cases the supply is from deep cased wells.

The following is a summary of work and details during the year 1914:

Date	Place	County	Occupation
Jan. 3	Longwood	Seminole	Diphtheria
Jan. 12	Winter Park	Orange	Typhoid fever
Feb. 3-13	Kissimmee	Osceola	Smallpox
Feb. 5	Webster	Sumter	Diphtheria
Feb. 16	Mt. Dora	Lake	Sanitary inspection
Feb. 17	Mascotte	Lake	Sanitary inspection
Feb. 19-30	Williston	Levy	Smallpox
Feb. 20	Morrison	Levy	Smallpox
Mar. 21	Kissimmee	Osceola	Smallpox
Mar. 30	Sanford	Seminole	Vital statistics
Apr. 1-7	Kissimmee	Osceola	Smallpox
Apr. 15	Orlando	Orange	Vital statistics
Apr. 17-27	Kissimmee	Osceola	Smallpox
Apr. 29	Umatilla	Lake	Smallpox
May 16	.....	Marion	Smallpox
May 18-20	Holder	Citrus	Smallpox
May 22	Bellevue	Marion	Hookworm campaign
May 23	Dunnellon	Marion	Hookworm campaign
May 25	McIntosh	Marion	Hookworm campaign
May 26	Citra	Marion	Hookworm campaign
May 27	Winter Garden	Orange	Sanitary inspection
May 28	Dunnellon	Marion	Hookworm campaign

Date	Place	County	Occupation
May 29	Bellevue	Marion	Hookworm campaign
May 30	Dunnellon	Marion	Chickenpox
June 4	Citra	Marion	Hookworm campaign
June 17	Oklawaha	Marion	Rabies
June 20	Sanford	Seminole	Vital statistics
July 4	Enterprise	Volusia	Diphtheria
July 13	Dunnellon	Marion	Inspection of wells
July 17	Webster	Sumter	Pellegra
July 20	Dunnellon	Marion	Collecting water specimens
July 24-30	Enterprise	Volusia	Diphtheria
Aug. 4	Ocala	Marion	Smallpox
Oct. 7	Umatilla	Lake	Pellegra
Oct. 23	Sanford	Seminole	Vital statistics
Nov. 4	Tavares	Lake	Sanitary conference
Nov. 13	Mt. Dora	Lake	Typhoid fever
Nov. 21	Orlando	Orange	Sanitary inspection
Dec. 5	Zuba	Marion	Typhoid fever
Dec. 11	.....	Marion	Pellegra

Respectfully submitted,

W. P. CRIGLER,

Assistant to the State Health Officer.

REPORT OF DR. J. E. TAYLOR

CENTRAL DISTRICT.

Gainesville, Florida, January 1st, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville.

DEAR DOCTOR:—I am attaching hereto my annual report for 1914.

Date	Place	Nature of Detail
Jan. 1-22	Jacksonville	Duty in executive office, investigation of smallpox in Duval County, vaccination. Investigation of diphtheria in So. Jacksonville.
Jan. 22-23	Winter Park	Investigating an outbreak of typhoid among the school children.
Jan. 24-25	Interlachen	Investigating an outbreak of diphtheria.
Jan. 26-31	Jacksonville	Duty in executive office. Smallpox investigation and vaccination in So. Jacksonville.
Feb. 1-20	Jacksonville	Duty in executive Office. Continuation of smallpox work in the South Jacksonville section of Duval County.
Feb. 20-28	Tallahassee	Routine work of office of Assistant to the State Health Officer.
Mar. 1-3	Tallahassee	Routine office work.
Mar. 4	Tallahassee	Investigation and isolation of diphtheria case near Tallahassee.
Mar. 5-9	Tallahassee	Routine office work.
Mar. 10-12	Chattahoochee	Visit to the Florida Insane Asylum and conference with staff relative to sanitary conditions.
Mar. 12-31	Tallahassee	Routine office work. Investigation of sanitary nuisance. Conference with local physicians on pellagra.
April 1-5	Tallahassee	Routine office work.
April 6	Tallahassee	Suspicious eruption. Consultation. Diagnosed chickenpox. Isolation.
April 7-9	Tallahassee	Routine office work.
April 10-13	Marianna	Smallpox. Consultation.
April 14-25	Tallahassee	Routine office work.
April 25-30	Blountstown	Suspected smallpox. Isolation. Vaccination.
May 1-3	Blountstown	(Detail of April 25th)
May 4-5	Tallahassee	Routine office work.
May 7	Chipley	Sanitary nuisance. Conference with property owner and Mayor. Abatement.

May 8-18	Tallahassee	Routine office work. Investigation of alleged smallpox. Diagnosed chickenpox. Meeting of City Council. Ordinance requiring registration of midwives. Ordinance requiring manure bins. Ordinance requiring the muzzling of dogs. Conference with Womens Club. Address to the Parents-Teachers Association.
May 18-23	Greenville	Investigation of outbreak of typhoid. Examination of drinking water. Conference with Mayor and City Council. Visits to patients and talks to nurses on necessity of screening and proper disposition of excreta.
May 23-26	Tallahassee	Routine office work. Visits to typhoid patients. Talks with nurses on necessity of proper screens, disposition of excreta and typhoid vaccination.
May 26-27	Greenville	Further investigation of the typhoid outbreak. Re-examination of water.
May 27-31	Tallahassee	Routine office work.
June 1-4	Tallahassee	Routine office work. Further investigation of typhoid. Examination of water. Inspection with recommendations of surface privies.
June 4	Midway	Investigation of two cases typhoid. Recommendations regarding surface privies and water supply. Talks as to the value of screening and typhoid vaccination.
June 5-8	Tallahassee	Routine office work. Investigation of typhoid outbreak continues. Examination of milk.
June 8	Greenville	Further work on typhoid.
June 9-12	Apalachicola	Vital Statistics. Conference with local doctors and City Council on sanitary conditions. Address made the Civic League.
June 12	Woodville and St. Marks	Visited these towns in order to investigate conditions with especial reference to typhoid. No typhoid found. Talked with citizens as to proper measures to prevent its appearance.
June 13	Chaires, Capitola and Lloyds	Typhoid. Talks with citizens and patients respecting the proper disposal of excreta, the role flies play in scattering typhoid, vaccination, screening, etc.
June 14	Tallahassee	Further work on typhoid.
June 15	Midway	Typhoid.
June 16	Tallahassee	Typhoid.
June 17	Wakulla, St. Marks and Woodville	Inspection with reference to the prevalence of hookworm infection.
June 17-20	Tallahassee	Routine office work.
June 20-30	DeFuniak Springs	Investigating an outbreak of diphtheria. Isolation.

July 1-11	Tallahassee	Routine office work.
July 11-18	DeFuniak Springs	Further work on the diphtheria outbreak. Isolation. Immunizing doses antitoxin.
July 18-27	Tallahassee	Investigating an outbreak of sore throat. Examination of milk. Inspection of with recommendations to dairies.
July 27	Quincy	Arranging for showing of Fly Reel under auspices of Civic League.
July 28-31	Tallahassee	Continuation of work on dairies. Demonstration of organism in milk causing the sore throat.
Aug. 1-3	Tallahassee	Routine office work.
Aug. 4-7	Apalachicola and Port St. Joe	Inspection with reference to the possibility of landing rats from incoming ships and lighters. Recommendations to city officials and stevedores as to rat-guards.
Aug. 7-18	Tallahassee	Routine office work.
Aug. 18	Jacksonville	Conference with Drs. Porter and Dobbs relative to work in the Central District, to which I had been transferred.
Aug. 19-27	Gainesville	Routine office work.
Aug. 27-29	Lloyd	Investigation of reported contaminated well.
Aug. 29-31	Perry	Investigation and examination of city water supply. Conference with and recommendations to city officials.
Sept. 2-19	Gainesville	Routine office work. Conference with City Health Officer and City Board of Health regarding health work in Gainesville. Familiarizing myself with conditions prevailing in this section of the state.
Sept. 19	McIntosh	Investigation of pellagra. Conference with local physician.
Sept. 19-30	Gainesville	Routine office work. Beginning medical inspection of school children.
Oct. 1-23	Gainesville	Continuation of medical inspection of school children of Gainesville.
Oct. 23-31	Gainesville	Vaccinating school children. Routine office work. Conferences with local physicians on diphtheria and scarlatina.
Nov. 1-15	Gainesville	Routine office work. Arranging for booth at Alachua County Fair. Conferences with local physicians on diphtheria, scarlatina and pellagra.
Nov. 16-19	Gainesville	Operating booth at county fair. Distribution of literature. Talks with visitors.
Nov. 19-20	Dowling Park	Scarlatina. Isolation.
Nov. 20-30	Lamont	Smallpox. Isolation. Vaccination.
Dec. 1-4	Jacksonville	Attending meeting of the American Public Health Association.
Dec. 4-8	Lamont	Further work on smallpox. Wholesale vaccination. Isolation.

Dec. 8-19	Gainesville	Routine office work. Conferences with local physicians on diphtheria, scarlatina and pellagra.
Dec. 19-22	Newburn	Smallpox. Isolation. Vaccination.
Dec. 22-31		Annual vacation.

As can be seen from the above outline, my work for the year 1914 has been diversified. During this period practically all the public health problems a representative of the Board is called to face have arisen and demanded attention. This makes an extended report of details almost impossible, and with the hope that my report will be clearer as well as more readable, I shall outline the work under the different headings.

My first detail on account of typhoid was to Winter Park. Typhoid Fever. Upon my arrival in this town, and after locating the cases, two in number, as well as the former cases, I made an inspection of what, in my opinion, were the only possible sources of infection, to-wit: the water supply, the access of flies to human excreta and the milk supply. Bacteriological examination of the water and milk supplies eliminated these possible factors, and practically convicted the fly. As all of the cases both active and convalescent, were among the school children, an inspection was made of the school premises where I found conditions extremely bad. The toilet facilities were inadequate and dirty. Flies had access to the excreta at all times, and as the school rooms were not screened, could roam at will over the hands and faces of the pupils. The installation of sanitary closets promptly stopped the progress of the disease.

The next outbreak of typhoid I was called on to assist with was scattered from Greenville to Midway on the Tallahassee division of the Seaboard Railway. Two cases developed in Midway, nine in Tallahassee, four in and around Chaires, one in Lloyds and five in Greenville.

By bacteriological examinations, water and milk as possible causative agents were ruled out in Midway, Tallahassee and Lloyds. Repeated examinations of the water supply of Greenville proved a colon infection of all surface wells, and while the typhoid organism was not found, I am not convinced that the water supply did not have something to do with at least some of the cases, especially as typhoid has been periodically present in and around Greenville for a number of years.

In the towns mentioned above, with the possible exception of Greenville, the ordinary house fly was unquestionably the agent by which the disease was spread. Screening of patients and proper disposal of excreta, with, in Greenville, the additional precaution of using boiled water, all of which I personally supervised, aborted what at the beginning appeared to augur an unprecedented outbreak of this disease.

In the control of these cases, I vaccinated quite a number of people who came in more or less intimate contact with the patients, with the most satisfactory results; and should typhoid break out again this year in Greenville, in addition to the condemnation of surface wells, I would advise general vaccination.

smallpox.

During the year I have been detailed to handle outbreaks of smallpox at DeLand, the South Jacksonville section of Duval County, Marianna, Blountstown, Lamont and Newburn. The number of cases seen were six, twenty to thirty, none, none, twenty-three and four respectively. The diagnosis was confirmed in Duval County, DeLand, Lamont and Newburn. Control of the outbreaks was by isolation and vaccination. Approximately 550 vaccinations were done.

The prevailing type of the disease was discreet; however, I saw several confluent cases, and during the latter part of the year, these severe confluent types seemed to be on the increase. Vaccination has proven, as it always does, wonderfully efficacious. As an illustration of this fact, smallpox was scattered over a large area in and around Lamont, among negroes, where ordinarily few vaccinations could be done on account of the prejudice against it among the colored people, but by virtue of hard work practically the entire population was vaccinated, and as a result the disease was stopped within the short period of two weeks, and now, two months later, no new cases have developed.

As a rule, the people of my section of the state are satisfied with our present method of handling smallpox, i. e., simple isolation and vaccination; however, some few criticize this method and think we should institute the obsolete shot-gun quarantine. Usually a talk to such dissatisfied people will show them the tremendous financial burden such quarantine

would entail and the utter uselessness of it in view of the ease, safety and preventive power of vaccination.

It appears to me that the people generally are becoming more and more convinced of the safety and value of vaccination as it is now performed, and it is no Utopian dream to think that, in the course of a very few years, smallpox will cease to exist as a public health problem in Florida.

I have visited during 1914 South Jacksonville, Interlachen, Tallahassee, DeFuniak Springs and Gainesville in connection with diphtheria. In none of these towns has there been anything like a definite epidemic, with the exception of Interlachen and the nearby town of Kenwood where nine cases were reported.

Diphtheria

Control consisted in isolation and disinfection.

In diphtheria, as well as the other exanthemata, I have almost decided that formaldehyde fumigation is useless, and in fact causes harm in most cases on account of the faith placed in it by the laity as well as a good many doctors. In lieu of fumigation, I boil everything that can be boiled, sun for at least twelve hours every thing that can be sunned, and wash with a one to one-thousand solution of bichloride of mercury every thing else with which the patient has come in contact.

During the year, I have had to deal with scarlet fever in Dowling Park and Gainesville. The cases at Dowling Park were children of a boarding house keeper, and, consequently, I could not definitely locate the origin, especially as neither of the two cases had been away from home for a considerable period of time prior to onset and had had no visitors. The most probable hypothesis is an infection brought on the clothing of some boarder.

Scarlatina.

The situation in Gainesville has been rather difficult to handle, and while there has been no serious outbreak, new cases have developed from time to time during the past five months. Practically all, if not all, of the patients have been children from the third grade of the public schools. This fact makes it seem probable that there is a scarlet fever "carrier" in this grade, but on account of the little knowledge we have of

the etiological factors it appears impossible to establish this theory or ascertain the origin of the contagion.

Whether it is the climate I am not in position to say, but the fact remains that of the approximately twenty cases I have seen, most have been very mild—in fact, in many of them the diagnosis was impossible until typical desquamation began.

Control was by strict isolation.

lalaria.

I have not had a single detail during the year on account of malaria. I do not mean to intimate by this that there has been absolutely no malaria in the districts in which I have worked, but I do mean to say that malaria, as an epidemical disease, has not been present. I have made it a point to talk with the physicians of the different communities visited regarding the prevalence of this disease, and have found that communities which formerly had hundreds of cases, only had a small number in 1914. The explanation of this fact is, in my opinion, the wider use of screens and the almost universal use of mosquito nets for beds. The knowledge that the mosquito causes malaria has sifted down to even the most ignorant negro, and this, as well as the discomfort of being nibbled on all night, has brought about the more general use of protecting materials.

ellagra.

I have been called in consultation on pellagra some twenty to twenty-five times during the year. Whether or not this disease is increasing is a question rather hard to decide, but I have personally come in contact with many more cases than formerly.

Until the etiology of pellagra is settled, it seems that nothing can be done from the public health standpoint toward its prevention; however, since the original report of Dr. Goldberger, of the U. S. Public Health Service, I have been advising the dietary regime suggested by him, reinforced by tonics. On account of the nature of pellagra, it is too early yet, in my opinion, for too great hopes to be founded on this method of treatment, but it is true that, for the time being at least, the pellagrins are benefited.

Nothing I have seen would indicate that pellagra is at all contagious or infectious.

Vital statistics has claimed a good deal of my time during this year. As a rule, the public is enthusiastically in favor of it, and in no town have I heard unfavorable comments. Judging from the communities I have visited, and the cordial support this work has received, I think it only a matter of time until we can have state-wide collection of morbidity as well as vital statistics. Personally, I can see no more beneficial work than this, both from the standpoint of public health work and the disabusing of minds prejudiced against our state by the rumored prevalence of certain diseases. In this connection, I wish to say that I have talked with the different physicians with whom I come in contact, and this includes almost every one in Central and West Florida, along the line of the prevalence of certain diseases popularly supposed to be widespread in this state, and I find in almost every locality a low morbidity statement for malaria, especially of the pernicious types, haemoglobinuric fever, amoebic dysentery, etc. An authentic statement of this fact, based on the accurate collection of statistics, could not but have a profound influence on property values. In my opinion such figures would, in the course of five to ten years, increase the value of farm lands from two to five per cent.

Vital Statistics.

My work on sanitation during 1914 was, as a matter of course, in an advisory capacity.

Sanitation.

I met with the Mayor and City Council of Apalachicola to advise with them regarding the installation of either an Imhoff or septic tank. While no decisive action was taken, I believe it only a matter of time until Apalachicola is provided with adequate sewage disposal facilities. In the meantime, this problem is being fairly satisfactorily handled by means of well constructed surface privies, and upon my last visit to this town an ordinance strictly regulating the construction as well as the handling of excreta from these privies was being enforced.

I also met with the City Council of Quincy on the question of proper disposal of sewage, but on account of a city charter weak in this particular, nothing could be done without creating a great deal of local friction.

The town of Greenville, on account of the infected wells mentioned elsewhere in this report, was visited several times and addresses were delivered both to the Mayor and City Council and to the citizens generally in an effort to have a municipal water supply installed. The depression caused by the beginning of the European war has, for the time being, thwarted all efforts. However, the majority of the voters of the town expressed themselves as being very much in favor of this move, and in all probability the matter will be put through some time during the coming year.

Crusades against the house fly were made in Tallahassee, Apalachicola, Quincy, Chipley and Greenville. In these crusades, our fly-reel was used, and attracted much attention. Talks by local physicians and myself were made, and leaflets briefly setting forth the danger from flies and how to abolish breeding places were given to the audiences. By special request, the reel was shown three times in Apalachicola, twice in Quincy and twice in Tallahassee.

I addressed during the year the Civic Leagues of Apalachicola, Tallahassee and Quincy, the Parents-Teachers Association of Tallahassee, and the City Councils of Tallahassee, Apalachicola, Quincy, Perry and Greenville, on such subjects as the handling of the fly problem, ways in which Civic Leagues could assist in public health work, the common ailments of children, general public health, etc.

The general health of Tallahassee during 1914 was below the average on account of the presence of the infectious diseases. Nine cases of typhoid occurred during the late summer and early fall with two deaths. One case of diphtheria. Two cases chickenpox. No other exanthemata. No malaria.

In June an outbreak of a streptococcic sore throat occurred. In an endeavor to ascertain the causative agent, a bacteriological examination of the milk supply was made with the somewhat astonishing result that every dairy showed contamination of its product with not only the organism associated with this sore throat; but colon bacilli as well, and with bacterial counts ranging up to the enormous total of 265,000,000 per c.c. A crusade for better milk, in which I was ably assisted by the

General Health
Conditions.
Tallahassee.

local authorities as well as the dairymen, resulted in a much better milk and the cessation of sore throat.

In Apalachicola no outbreak of any infectious disease was reported. Very few cases of malaria notwithstanding the fact that this town is surrounded by marshes and the Anopholes can be seen nine months out of the year. The practical absence of this disease promises well for our ultimate control and elimination of a pest that has cost the state untold thousands of dollars. No typhoid. No exanthemata.

Apalachicola.

Health conditions good. No exanthemata. No malaria. No typhoid.

Quincy.

With the exception of the five or six cases of diphtheria, DeFuniak Springs was not visited by any disease other than the diseases which any community, either north or south, is heir to.

DeFuniak
Springs

Until the water supply and surface privy problems of Greenville are settled, health conditions will, in my opinion, remain extremely bad. Hookworm infection and Diarrhoeal diseases are prevalent.

Greenville.

Health conditions in Perry are very good indeed. This is another town where the lowered malarial rate is noticeable. No typhoid or exanthemata.

Perry.

Health of the community good. No infectious diseases except, possibly, a sporadic case or two.

Live Oak.

This town, as well as High Springs, Alachua and Fort White, has had an exceptionally healthy year. With the exception of sporadic cases of the exanthemata no serious diseases have occurred aside from, of course, the diseases which we have not as yet found a method of preventing.

Lake City.

The morbidity rate of Gainesville is low compared with cities of the same population in other parts of the United States. While it is true that cases of scarlatina and diphtheria have developed from time to time, prompt work has prevented anything approaching an epidemic.

Gainesville.

Chaires, Midway, Woodville, St. Marks, Lloyds, Lamont, Driftin, Chipley, River Junction, Dowling Park, Hampton Springs, Newberry, Sopchoppy, Capitola, Blountstown, Wewahitchka, Marianna, Cottondale, Winter Park, Interlachen,

Kenwood, Palatka, Port St. Joe and Monticello have all been visited during the year and with the exception of the diseases noted in the list of details, the health has been found to be uniformly good.

Respectfully submitted,

J. E. TAYLOR, M. D.,

Asst. to the State Health Officer.

REPORT OF DR. M. E. HECK

EAST COAST DISTRICT.

St. Augustine, Fla., December 31st, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Florida.

DEAR DOCTOR:—As Assistant to the State Health Officer, I respectfully submit my report for the year ending December 31st, 1914.

In my last report I attempted to give you an idea as to the prevalence of the various communicable diseases in my district. However, as there is no adequate state law by which morbidity reports may be accurately collected, my previous report in this respect was valueless for statistical purposes. For this reason I have omitted my report by counties as was my plan last year. This year I shall confine myself to my monthly reports as submitted to the State Health Officer, with a more complete report on special details, and a few suggestions which I respectfully offer; they are based upon a careful and serious consideration of conditions now existing in my district.

Special details are as follows:

January 8th—St. Augustine—Investigated alleged shipments of clams taken from San Sebastian river opposite F. E. C. railroad shops. These shipments were stopped pending investigation, but as no contamination was proved by examination of specimens of clams sent to the laboratory no further steps were taken.

January 12th—St. Johns County—Began hookworm investigation in some of the country schools. During this investigation I visited the following public schools of St. Johns County with the results stated.

Hastings—Assembled the four schools in one room and gave talk on hookworm disease after which sample cases were distributed. Many children looked as though they were infected, but the principal of this school never submitted specimens so there is no way of telling the percentage of pupils infected.

At Billingsville we had the same lack of interest. There are undoubtedly cases in this school but no specimens were received for examination.

Moultrie school submitted eighteen specimens of which thirteen were positive hookworm cases; New Augustine (two schools) submitted forty-five specimens of which thirty-six were positive; and Julington Creek school submitted sixteen specimens of which fifteen showed infection. Free treatment was given to pupils of Moultrie and Julington Creek schools.

January 21st to 23rd—West Palm Beach—Investigated alleged insanitary condition of Lake Worth. The principal complaint was from per-

sons who objected to bad odors noticed along the shore at various points. This was apparently from accumulations of seaweed and rubbish along the waterfront and not from sewage as supposed. However, the odors noticed seem to have helped influence public opinion as West Palm Beach is now well sewered by a septic tank system.

While at headquarters in St. Augustine during part of January much of my time was spent in microscopic examinations of hookworm specimens from the public schools and various minor investigations.

February 6th to 10th—Titusville—Detailed to Titusville to investigate cause of typhoid fever. Began with one imported case, probably transmitted to others through agency of flies. On this detail I addressed the Progressive Culture Club and the city council. The latter passed an ordinance creating a city board of health, and the bucket system of fly proof privies was installed in those portions of Titusville not drained by sewers.

March 13th to 18th—Daytona—Investigated source of infection of cases of typhoid fever at Daytona, and Seabreeze. Oysters used at Hotel Clarendon and oysters taken from Halifax river right below city limits of Daytona showed evidence of sewage contamination, consequently oysters were determined to be the probable cause of the epidemic since all the patients in this epidemic had eaten raw oysters.

March 24th to 26th—Cocoa—Isolated one case of smallpox (colored) and vaccinated over a hundred people—white and colored.

March 27th to May 2nd—DeLand—Was in charge of smallpox epidemic at DeLand and vicinity, isolated over fifty cases of whom four were white persons, and vaccinated 632 negro and 104 whites. During my stay in DeLand, while smallpox patients were being cared for in the isolation camp, an exhibit was held in one of the store windows in DeLand showing how flies breed in horse manure. Following this exhibit there was a general clean up of all the horse stables and dairies and an active crusade against flies.

On the day of my return from this detail I carried samples of milk to the laboratory from the dairies of DeLand and Daytona, all of which showed high bacterial counts and many of which showed the presence of colon bacilli.

May 10th to 12th—Fellsmere—Inspected alleged insanitary conditions of all premises in Fellsmere and made recommendations for improvement. As a result the Fellsmere board of sanitation issued a booklet ordering all property owners to comply with the recommendations.

May 13th—New Augustine—Inspected alleged insanitary conditions reported by Mr. Guerin of New Augustine.

May 25th to June 13th—New Augustine—Combined fly exhibit and hookworm campaign in New Augustine. Few examinations were made but as a result of this work a sanitary committee of citizens was formed and a pamphlet was issued recommending general improvement in sanitary conditions, and the building of pit system fly proof privies. About fifty per cent of the people complied.

June 21st to 22nd—Largo, Florida—Gave illustrated lecture on sanitation.

July 1st to 2nd—Fellsmere—Inspected premises and on evening of July 2nd gave talk on hookworm disease, and sanitary privies. My inspection showed that all premises in Fellsmere were supplied with sanitary privies. The sanitary committee was made a permanent organization, the bucket system of fly proof privy was adopted and buckets are emptied by scavenger once each week. At the time of this visit Fellsmere was in excellent condition from a sanitary standpoint.

July 11th—Palatka—Called on Mr. Williams, city clerk, in an effort to obtain better returns of Vital Statistics.

July 26th to August 21st—Daytona—During this period, with the assistance of Dr. Roy Howe, city physician, over a dozen cases of diphtheria were isolated and free antitoxin was administered to the indigent, both for curative and immunizing purposes.

During my stay in Daytona two cases of chicken pox (white) and one case of smallpox (colored) were isolated. Over four hundred persons were vaccinated of whom all but three were colored.

At Kingston, a suburb of Daytona, where most of the cases of diphtheria occurred, insanitary surface privies were condemned and as a result nearly all of these were replaced by fly proof vault system privies.

While at Daytona I received notice to make investigation of alleged insanitary conditions at South Melbourne. I went to Melbourne August 19th, returning to Daytona next day. No results seem to have followed this visit. The request for a representative of the State Board of Health came from colored people, but I was subsequently unable to learn whether any of my recommendations had been complied with.

September—No special duties or details. Routine office consultations and correspondence.

October 6th to 7th—Palatka—Addressed city council and recommended passage of "Model Ordinance" for reporting of Vital Statistics.

October 8th—Green Cove Springs—Addressed city commissioners relative to insanitary privies and recommended that they pass an ordinance with a view to improving conditions. Also recommended that they pass the "Model Ordinance" for the reporting of Vital Statistics.

October 15th—St. Augustine—Addressed a public meeting on "The Value of a District Nurse." Such nurse has since been employed.

October 17th—New Augustine—Isolated case of scarlet fever.

October 21st—St. Augustine—Called on case of pellagra and reported same to headquarters.

November 4th—New Augustine—Addressed Village Improvement Association on hookworm disease.

November 5th to 7th—Fort Pierce—Inspected alleged insanitary restaurant and made recommendations for improvement. Also conferred with mayor relative to the "Model Ordinance" for Vital Statistics.

November 17th to 18th—Cocoa—Investigated alleged insanitary conditions of City Point—Sharpes public school and reported findings in the case to the State Health Officer.

December 2nd and 3rd—Jacksonville—Attended meeting of American Public Health Association and Southern Health Exhibit in Jacksonville.

December 12th—Palatka—Called on Mr. Fearnside and several members of the city council and urged the passage of the Model Ordinance, then pending, for the reporting of Vital Statistics.

During the past year, while stationed at my headquarters I have spent considerable time in inspections of the various local dairies, and a number of alleged insanitary conditions reported directly to me; I have made microscopic examinations of hookworm specimens, and have tried in various ways to impress upon the people in my community the importance of measures for the prevention of disease. As results are sometimes slow and often discouraging, it will require some time to determine just how much good has been accomplished.

Briefly the sanitary status in the towns I have visited is as follows:

Jacksonville—All sanitary matters are under the jurisdiction of a very efficient board of health. The city is in the Registration Area of the United States and the various communicable diseases are reportable by ordinance. The city employs several physicians who make examinations of school children and their work is supplemented by nurses employed by the city.

In all respects Jacksonville has as good an administration of Public Health matters as any city of its size in the country.

Green Cove Springs—Here there is no organized health department. A city physician is employed to look after the indigent sick, but he has no authority to enforce improvements in sanitary conditions. The city is under a commission form of government and the chairman of these commissioners maintains some of the most insanitary conditions in town; namely: a horse stable near the centre of town, and a number of filthy surface privies. The Model Ordinance for the reporting of Vital Statistics has not been passed.

Palatka—This city has no board of health and no health officer; the city physician is employed by the city to look after the indigent sick, and to see to the isolation of cases of communicable diseases. The city has a sanitary committee of the council and they represent together with the balance of the council, the health organization of Palatka.

It is estimated that over half of the city is sewerage, either with gravity system or cess pools, and the remainder has a poor and insanitary system of surface privies.

From last accounts the Model Ordinance was in course of passage, but up to three months ago the returns of birth and death certificates were very unsatisfactory.

St. Augustine—Here there is a board of health appointed by the council, but this board seldom meets, the whole sanitary management of the city being under the chairman of the board of health. The chairman, Dr. Underwood, has under him a sanitary inspector. At the present time the more prominent portions of the city are kept in a neat and sanitary condition, but there are a number of conditions which need improvement. The screening ordinance requiring the screening of hotels and boarding houses, fruits or vegetables exposed for sale, meat shops, privies, etc. is not enforced; the various dairies both inside and beyond the city limits are not regulated as to sanitary requirements; and no ordinance has been passed compelling owners of stables to properly dispose of the manure. Consequently the breeding of flies goes on ad libitum especially in summer time.

The Model Ordinance for Vital Statistics has been passed but it is not yet on a smoothly working basis.

At present the council has under consideration an ordinance calling for an election for the bonding of the city for a system of sewage disposal. Already, the greater portion of the city is drained by various private and individual lines of sewers.

St. Augustine has a good supply of pure artesian water.

New Augustine—Here there is no city or town organization; New Augustine being unincorporated in spite of having nearly two thousand residents.

Since the formation, last summer, of a sanitary committee about fifty per cent of the people have put in the vault system of sanitary privies. The balance have insanitary surface privies and hogs and chickens have free access to the fecal mass at the back of each privy. In New Augustine some of the more progressive people have installed individual sewerage

systems. However, they complain of the conditions by which they are surrounded.

Daytona, Kingston, Daytona Beach and Seabreeze—Seabreeze and Daytona Beach are both well sewerage by individual systems and the general sanitary status is good.

Daytona is installing a system of sewage disposal which will make Daytona one of the most thoroughly sewerage towns in my district. In some of the outlying portions of the city and especially in the colored section there are still many surface privies but these shall be replaced by modern sewer connections as soon as practicable.

In Kingston, an unincorporated suburb directly north of Daytona, the sanitary conditions have not been so good. For the past several years the various outbreaks of communicable diseases have had their beginning in this unhealthy section and from here have spread to Daytona, Daytona Beach and Seabreeze. Notable among such diseases are typhoid fever, diphtheria and malaria.

Daytona has no board of health but a city physician looks after the indigent sick and he does practically all the public health work in the city. He is assisted by a sanitary committee of the council.

The Model Ordinance for Vital Statistics has been adopted in Daytona and so far reports have been received promptly.

DeLand—At the time of my last visit to this city, after the smallpox cases had subsided and the stables had been cleaned up, DeLand was in a good condition from a sanitary standpoint.

DeLand is sewerage mostly with cess pools and a few septic tanks, but there are still some portions which have surface privies.

The health administration of the city is carried on by a city board of health, one member of which body is a physician and is the city health officer. In addition there is a sanitary committee from the council.

DeLand is particularly wide awake in matters of disease prevention, especially since their visitation of smallpox, and the people take kindly to any recommendations for their improvement in matters of sanitation.

Titusville now has a city board of health, a health officer, and a good system of sewage disposal, about half by gravity system of sewers and one-half by fly proof bucket system privies, with concrete base for buckets.

Cocoa—Sanitary condition good excepting for the fact that there are still many surface privies in town. Also, horse stables are not regulated so as to prevent the breeding of flies.

Fort Pierce—My principal criticism here is directed towards the surface privy and the horse stables.

West Palm Beach—This city now has a good sewer system with septic tanks arranged on the unit system. The sanitary condition of the town is good and there is a hearty cooperation between the local health officer and the city officials.

West Palm Beach is the only town I have visited in my district which does not have artesian water. Here the water supply is from a fresh water lake situated west of the town.

In conclusion, I beg to submit the following recommendations to the State Board of Health.

Conclusion.

1. That they urge the passage of a law, along the general line of the "Model State Law" for the collection of Vital

Statistics and Morbidity reports for all incorporated towns and cities in Florida.

2. That they urge a law regulating dairies, and stating the requirements which must be complied with.

3. That they urge a law regulating Public School sanitation, with special reference to sewage disposal.

4. As Hookworm disease is best attacked through the public schools, I would recommend that the State Board of Health be given authority by law to collect specimens from school children, failure to submit such specimen, to be sufficient to bar such pupils from attendance at schools.

5. With reference to surface privies for rural homes I recommend that the State Board of Health discontinue advocating the bucket system of sanitary privy and adopt a vault system.

The bucket system has the following objections:

1. Hinge doors at back warp or become loose or drop off.
2. Buckets get leaky or are removed by malicious boys.
3. Buckets must be emptied and this work is distasteful.

In favor of the vault system I will say it has practically the same points to commend it as has an ordinary cess pool. It is on the same principal and the vault may be attached to any surface privy and lined with bricks, concrete, plank or boards. It does not admit flies, and if a few do get in, all larvae may be destroyed by pouring a little kerosene into the pit from time to time, or a little chloride of lime. Such a privy is practically a cess pool, and like a cess pool will last a number of years before filling up. Should it fill up in a few years a new pit may be dug and the old filled in with soil. In such a privy fecal matter containing Hookworm eggs is buried and of no further danger.

6. I believe much could be accomplished if the State Board of Health and its representatives had more power in the enforcing of the various laws in relation to public health. At present the plan is this: A representative is sent to investigate an alleged insanitary condition and pass judgment on it. The people who are being annoyed by such nuisances must either endure same, regardless of how injurious such nuisance may be to their health, or else incur the enmity of their

neighbors by bringing suit against them themselves. In some sections of my district such an action would lay the complaint open to various mean acts in retaliation for a perfectly just suit at law.

7. I believe the State Board of Health should seriously consider the regulation of sewage disposal on Pullman and other railroad passenger coaches. I believe it is highly probable that cases of typhoid fever or other sewage-borne diseases may be transmitted in this way and I believe some method should be adopted by which fecal matter may be rendered harmless before it is discharged.

During the past year my relations with the State Health Officer and my various co-workers have been most pleasant and I wish here to acknowledge my appreciation of all the courtesy shown me.

Respectfully submitted,

MAURICE E. HECK, M. D.,

Assistant to the State Health Officer.

REPORT OF DR. C. H. DOBBS

Jacksonville, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I have the honor to submit the following report of my activities during the year 1914 in the discharge of my duties as Assistant to the State Health Officer.

The whole of the month of January, with the exception of a few days' leave of absence, was spent in Gainesville; no reports of importance being received during the month except a notification from Dr. W. C. Young of Bronson, Florida, of the occurrence of a case of diphtheria there. Upon communicating with Dr. Young by telephone I learned that all possible precautions had been taken, including immunization of all contacts and I considered a visit to Bronson entirely unnecessary under the circumstances.

In accordance with instructions I reported in Jacksonville on February 9th for duty in the Executive Office; and since that time have remained in Jacksonville in the discharge of my regular office duties when not engaged upon special details elsewhere in the State. Aside from a number of unimportant details during February, two matters of more or less interest arose—one a smallpox outbreak at Hawthorn, and the other the discovery of a sewage pollution of the municipal water supply of Live Oak.

The Hawthorn smallpox outbreak necessitated two visits to that town, the first being spent in a general survey of conditions, and the second in vaccinating practically the whole of the colored population as well as a considerable portion of the white.

So far as I was able to ascertain there had occurred, in Hawthorn and the immediate vicinity, thirty-two cases of smallpox in a comparatively short time. During the two months following this rather extensive campaign of vaccination, and with practically no attempt at strict isolation of patients, only two new cases of the disease developed in the

immediate vicinity of the town while more than thirty cases occurred among the inhabitants of the rural districts who had refused vaccination at the time of my visit to Hawthorn.

The sewage contamination of the water supply at Live Oak proved to be a rather serious matter, necessitating a number of trips to that city during February, March and April. It was at first thought that the most probable source of contamination was a number of private sewer wells rather than the municipal sewage disposal plant. The following excerpts from my preliminary reports of this investigation will serve to give a fairly accurate description of the conditions existing at that time.

From Report for Week Ending Feb. 14, 1914:

Samples of water from Live Oak, received at the laboratory last week showed evidence of contamination but Dr. Hanson was not satisfied that they had been collected with proper care and desired that I go to Live Oak and personally collect other samples. I accordingly left Lake City Friday for Live Oak, where I met the City Engineer, Mr. L. T. Morgan, and went over the matter with him. I find that two wells are in use there, both of which are deep wells cased to a depth of 280 feet. The city has recently installed a sewerage system with septic tank the effluent from which is run into a dry well about 75 feet in depth. I think there is little probability that the effluent from this septic tank is a source of contamination to the water supply of the city. The storm water is carried off by an independent system and is run into a similar dry well of about the same depth as the one into which the effluent from the septic tank empties. As there are a number of open surface privies within the town this storm water might be a possible source of contamination but I consider this rather improbable. Many of the homes of the town are equipped with private sewerage systems, without septic tanks, the sewage being carried directly from the toilets to shallow wells varying from 50 to 100 feet in depth and it would seem that if the city water supply is actually contaminated by sewage these wells are the most probable source of the contamination. The examination of the specimens of water which I shipped to the laboratory Saturday may show that the error was in the collec-

tion of the first samples sent in. In any event, an ordinance has been passed requiring that all persons within the sewerage area connect with the city sewerage system so that within a short time the use of these private wells will be discontinued and that source of danger of contamination ended.

From Report for week ending Feb. 22, 1914:

Continuing the report in regard to the examination of the water supply of Live Oak; both specimens which I sent in to the laboratory last week showed evidence of a colon bacillus contamination. As I collected these specimens with all possible care we may, I think, eliminate the question of pollution during the collection of the samples and must recognize the existence of an actual sewage contamination of the water supply of this town. As I stated in my report of February 21st., the most probable source of this contamination seems to be a number of sewage wells, varying in depth from 60 to 100 feet, though I have traced no connection between these wells and the wells furnishing the city water supply. However, there exist in this section innumerable subterranean caverns at varying depths between which there is undoubtedly either a direct or indirect communication; and the water-bearing strata are of limestones of the Vicksburg group which, as stated in the report of the United States Geological Survey, are of a porous nature deriving a considerable portion of their water from surface seepage; all of which would seem to point to the probability of such a connection. I have written Mr. L. T. Morgan, the City Engineer, stating that I would discuss the matter fully with you and would probably return to Live Oak in the near future to conduct with him a more thorough investigation of the conditions.

Further investigation of the matter (in which Mr. George Hall Hazlehurst, Sanitary Engineer of Atlanta, Georgia, was called in consultation) seemed to show conclusively that the source of contamination was the deep sewage disposal well into which is discharged the effluent from the municipal septic tank.

The following report, dated April 11, 1914, gives briefly the most essential features and conclusions brought out by this joint investigation:

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—During the past week the work at Live Oak, looking toward some final solution of the problem there, has been continued. In accordance with arrangements made Monday, I met Mr. George Hazlehurst in Live Oak, Thursday, and with him again went over the situation, gathering as much information as possible in regard to the conditions. A full report of this investigation together with recommendations for remedying the existing conditions will be rendered you by Mr. Hazlehurst. Briefly Mr. Hazlehurst's conclusions were as follows: That, if the city of Live Oak continues to use the present wells, some method of sterilization of the water and of the effluent from the city sewage disposal plant *must* be adopted, (preferably liquid chlorine for the water supply and hypochlorite of lime for the tank effluent), and that in addition to these necessary measures it would be advisable to drop a six-inch casing within the old eight-inch casing of both wells filling in between the two with cement thus insuring an impervious casing for both wells. Further investigation of the source of contamination by methods outlined in a previous report may reveal conditions which will make it advisable to seek a new water supply for this city. Mr. Hazlehurst agrees with me that it is of prime importance that the numerous private sewage wells within the city should as soon as possible be connected with the city sewerage system in order that the *whole* of the sewage from the city may be treated as above mentioned at one point. As you know, the city of Live Oak has an ordinance which is practically identical with Chapter 6443 of the Florida statutes, relating to pollution of underground waters by improper disposal of sewage but it seems that a great deal of trouble has been experienced in the enforcement of this ordinance. It would seem that if it is possible to do so it might be necessary to handle the matter through enforcement of the State law through the county authorities.

From March 1st to April 25th several details were handled, all of which were of minor importance with the exception of

three visits to Live Oak in connection with the water pollution previously mentioned.

On April 25th I was detailed to Mars, Florida to assume control of a rather serious outbreak of typhoid fever in the convict camp of the Boca Grande Investment Company. The following report of this detail was addressed to the State Health Officer under date of May 2, 1914, and was transmitted to the Governor for his consideration.

Jacksonville, Fla., May 2, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—The following is a report of my investigation of a number of cases of typhoid occurring in the convict camp of the Boca Grande Investment Company near Mars, Florida.

This camp is in charge of Messrs. J. G. Boyd, of Jacksonville and C. T. Boyd, of Mars, both of whom assisted me greatly in my work at the camp and showed a willingness to do everything which I suggested for the betterment of conditions at the camp.

A word in regard to the location of the camp and the conditions prevailing before the time of my visit might be well. The main building, within a stockade, houses all the convicts. The kitchen and mess halls, both for prisoners and guards, are also in this building. Outside the stockade are three buildings, the commissary and two guards' houses. This camp is situated about four miles from Mars and at least three miles from the nearest dwelling. The water supply was from a shallow surface well distant about 75 feet from an open surface privy used by the prisoners. At the time of my arrival at the camp it had (at the direction of Dr. S. H. Blitch) been partially screened but I understand that at the time of the outbreak of typhoid the entire camp, including kitchen and mess hall, was unscreened. No milk is used at the camp except canned evaporated milk. No fresh, uncooked vegetables such as radishes, lettuce, etc., are used.

There are in the camp fifty persons—forty-two prisoners and eight guards—all white. All have been at the camp since January first of this year. The first case of typhoid occurred on March 2nd.

A thorough investigation of the conditions at the camp and of the history of the outbreak failed to reveal its source. All prisoners were questioned as to previous cases of typhoid but no history of any such case was obtained. The accuracy of these histories thus obtained is, of course, open to doubt. An examination of water from the surface well in use at the camp reveals evidence of contamination (probably B. Coli) but the laboratory was unable to isolate the typhoid bacillus. As previously stated, an open surface privy was in use at the time of this outbreak; but, as the drainage at the camp is in the opposite direction (toward a swamp), I do not think that the water supply need be seriously considered as a probable source of this typhoid infection. I think there is little doubt, however, that the spread of the disease in the camp after the occurrence of the first case was by flies.

Upon my arrival, I found that, while the camp had been partially screened and the drinking water was being boiled, conditions were far from what they should be. All the prisoners were sleeping in the same room, were served from the same kitchen in the same dishes. No steps had been taken at that time toward the immunization of the guards or the prisoners exposed to the infection.

The following steps were taken in the control of this epidemic, as outlined in my telegraphic reports to you. (1) Every prisoner and guard was given the first immunizing dose of Mulford Typho-bacterin. The second and third doses are to be administered at the proper intervals by Dr. Housley (a prisoner at this camp). (2) The boiling of all drinking water was continued until an examination of it could be made. Examination of a deep well at Mars showed it to be free from contamination and water for drinking purposes will hereafter be hauled to the camp from this well. (3) The whole camp was thoroughly screened. (4) The building which had been used as a commissary was emptied, thoroughly screened, and

converted into a hospital and all cases of typhoid were moved to this building and placed in charge of Dr. Housley who is in constant attendance upon them. (5) Arrangements were made for the burning of the excreta (not only from the hospital camp but also the contents of the tubs from the privy at the main camp.) (6) Separate dishes were provided for the use of the patients and these dishes, together with any other article removed from the hospital camp, are to be boiled before being taken again into the main camp. (7) After removal of patients to the hospital camp, their former sleeping quarters were thoroughly cleaned and all clothing, bedding, etc., were boiled. (8) Written instructions for the management of the camp and of these patients were furnished the captain of the guards and Dr. Housley.

In all, ten cases of typhoid have occurred—nine prisoners and one guard. When I returned to Jacksonville all the measures mentioned above had been carried out and I feel that there is little chance of any further spread of the disease. Mr. Boyd hopes to be able to secure other men to take the place of those now sick. I feel that with the camp in its present condition it will be perfectly safe to bring other men into it, perhaps safer even than taking them to some other camp where no effort has been made to guard against the spread of disease.

I regret that my investigation did not disclose the source of the disease. In the absence of any positive knowledge as to its source, I suppose we will have to fall back on the "typhoid carrier" theory to explain the introduction of the infection into the camp.

This report would be incomplete without some mention of the earnest and efficient work of Dr. Housley throughout the course of this epidemic. His constant attention has been of inestimable value and without it I think there is no doubt that at least one death would have occurred.

Mr. Boyd will keep us informed in case there are any further developments.

Very respectfully yours,

(Signed) C. H. DOBBS,

Ass't to State Health Officer.

After my return from Mars a number of matters arose, which, with the preparation of bulletins and posters on Hookworm Disease, occupied my time until June 1st, on which date I accompanied the State Health Officer from Jacksonville to Key West; remaining there until June 6th.

During June a number of cases of typhoid were reported from several of the suburbs of Jacksonville. This situation grew progressively more serious until it seemed that something more than the usual procedures would be necessary in its control. The following report and recommendations were accordingly submitted to the State Health Officer:

July 12, 1914.

Memorandum of investigation of typhoid situation in vicinity of S. A. L. shops.

In all, ten cases of typhoid have occurred in this section during the past six or eight weeks, these ten cases being distributed over an area of approximately one square mile. Four deaths have resulted.

Accompanied by Miss Attride, a nurse working under the Associated Charities, I made a thorough investigation of all these cases.

We found that the milk and water supply was varied, no two cases securing milk or water from the same source. All these cases have occurred in families of very moderate means, who use practically no fresh vegetables such as lettuce, radishes, etc., which are eaten raw. The possibility of infection from this source, which I should consider very unlikely in any case, may be disregarded. I think we may safely disregard water and milk supply.

All of the homes visited are provided with open surface privies and flies are numerous about all of them. Only one of the houses was screened and that in such a manner that it was hardly worth regarding.

Two of the cases were attending the Highway School at the time of the occurrence of the disease, but no other cases have developed among the pupils of this school and there had been no typhoid in the immediate neighborhood prior to the occurrence of these cases. I think, therefore, that we may disregard conditions at the school as a causative factor.

After a careful study of these conditions, it seems to me that this is another clear case of fly transmission.

There seems to be no hope of any great improvement in the sanitary conditions of this section and it would seem to me that the only method by which we can hope to control this outbreak is a wholesale vaccination of the people of this neighborhood. As practically all of them may be classed (under a liberal interpretation of the term) as indigent, I would suggest that we operate a sort of free dispensary on certain dates, notifying the people in this immediate section that typhoid vaccine will be administered without cost to all applying for it.

If this suggestion meets with your approval I shall make immediate arrangements to give the matter as much publicity as possible, and shall arrange places and dates for administration of the vaccine. * * * * *

These suggestions met with the approval of the State Health Officer and dispensaries for free anti-typhoid vaccinations were accordingly established and operated on Tuesdays, Thursdays and Saturdays at St. John's Park, Cummer's Mill and Lackawanna respectively during the months of July and August. On the whole a fair amount of interest was manifested and this dispensary work seemed to be productive of good results. The appended tables may be of interest, as showing the large proportion of persons who completed the three inoculations and the absence of severe or even moderately severe reactions in the great majority of cases.

During August I visited Live Oak in an attempt to secure the passage of the Model Ordinance for the Registration of Births and Deaths; but was unable to do so at that time. This city however, has since passed the ordinance.

With the exception of a visit to Live Oak to investigate several reported cases of smallpox, the whole of September was spent in Jacksonville, much of the time being devoted to the preparation of a Health Exhibit to be displayed first at the Southern Health Exhibition, held in connection with the annual meeting of the American Public Health Association; and afterwards to be used as a permanent traveling exhibit throughout the State. This work was continued during October and November, occupying practically all of my time, and the exhibit

finally completed on November 26th, was installed in the Morocco Temple.

Several diphtheria outbreaks on the outskirts of Jacksonville were investigated during these two months. None of these outbreaks were general, however, but were very easily controlled without serious development.

Practically the whole of December after the close of the annual meeting of the American Public Health Association, was spent in the preparation of additional exhibit material and in arrangements for proper packing for shipment through the State.

This exhibit, will, I think, prove a very important addition to the educational measures of the Board in its endeavor to bring to each citizen of our State the great gospel of disease prevention and sanitation.

There is submitted herewith a list of details during the past year, only the more important of which have been commented upon in this report.

Date	Place	County	Nature of Occupation
Jan. 1-30	Gainesville	Alachua	Received report of smallpox at Hawthorn, 3 cases diphtheria, 1 case scarlet fever, Gainesville; 1 case diphtheria, Bronson. Routine office work.
Feb. 1-6	Gainesville	Alachua	Conference with city health authorities regarding health conditions.
Feb. 7-10	Jacksonville	Duval	At executive office.
Feb. 11	S. Jacksonville	Duval	Investigation diphtheria in school.
Feb. 13-14	Hawthorn	Alachua	Smallpox. Vaccination 26 persons. Arrangement made for vaccination school children.
Feb. 15-16	Jacksonville	Duval	Routine office work.
Feb. 17-18	Hawthorn	Alachua	Vaccination of 54 whites and 84 negroes. Talk with mayor and city council regarding sewage disposal. Literature furnished.
Feb. 18	Gainesville	Alachua	Conference with health authorities regarding certain provisions to be incorporated in ordinances covering vital statistics, etc.
Feb. 19	Lake City	Columbia	Interview with authorities regarding collection of vital statistics.

Date	Place	County	Nature of Occupation
Feb. 20	Live Oak	Suwanee	Interview with mayor regard to passage of vital statistics ordinance. City Health Board to be established. Investigation water supply and collection of samples.
Feb. 21-26	Jacksonville	Duval	Routine office work. Water from Live Oak contaminated. Preparation of short paper on Communicable Diseases.
Feb. 27	Sanderson	Baker	Investigation reported smallpox. Diagnosed as chickenpox.
Feb. 28	Jacksonville	Duval	Routine office work.
Mar. 1	Jacksonville	Duval	Routine office work.
Mar. 2-3	Sanford	Seminole	Conference regarding diphtheria.
Mar. 4-9	Jacksonville	Duval	Routine office work.
Mar. 10-11	Live Oak	Suwanee	Investigation water contamination.
Mar. 12	Jacksonville	Duval	At executive office. Specimen water from Live Oak showed organism resembling B. Typh.
Mar. 13	Live Oak	Suwanee	Collection water specimen.
Mar. 14-20	Jacksonville	Duval	Routine office work. Investigation complaint on cesspool.
Mar. 21-23	Gainesville	Alachua	Investigation condition at fertilizer factories.
Mar. 24	Jacksonville	Duval	Routine office work.
Mar. 25	Live Oak	Suwanee	Continued investigation water contamination.
Mar. 26	Jacksonville	Duval	Visit to isolation hospital.
Mar. 27-28	Hawthorn	Alachua	Investigation smallpox. 19 vaccinated.
Mar. 29-31	Jacksonville	Duval	At office. Routine work.
Apr. 1-8	Jacksonville	Duval	Met A. C. L. train at Grand Crossing. Negroes brought in from Suwanee, suspected smallpox. Routine work, office. Investigation cesspool. Visit to isolation hospital.
Apr. 9	Live Oak	Suwanee	Investigation water pollution with sanitary engineer.
Apr. 10-16	Jacksonville	Duval	Investigation nuisance complaint. Saw case eruptive disease apparently mild smallpox. Second visit to case; mother refused vaccination, other members family vaccinated. Routine work, office. Arrangement for sanitary inspection of Fellsmere.
April 17	Orange Park	Clay	Smallpox. Brought to isolation hospital.

Date	Place	County	Nature of Occupation
Apr. 18-25	Jacksonville	Duval	Investigation reported rabid dog. Visits to isolation hospital, release of patients. Investigation case smallpox Spring Glen. Vaccination seven contacts.
Apr. 26-29	Mars Arcadia	DeSoto DeSoto	Management typhoid epidemic in convict camp.
Apr. 30	Jacksonville	Duval	Visit isolation hospital. Routine work.
May 1	Live Oak	Suwanee	Collection of water sample.
May 2	Jacksonville	Duval	Investigation 3 cases smallpox; toilet nuisance, Panama Park.
May 4	Hawthorn	Alachua	Smallpox. Vaccination.
May 5-9	Jacksonville	Duval	Routine office work. Visit isolation hospital connection with smallpox patients. Investigation sewer complaint.
May 10-12	White Springs	Hamilton	Smallpox, 8 cases. Vaccination, 78.
May 13-31	Jacksonville	Duval	Routine work, office. Preparation questions embalmers' examination. Visits isolation hospital. Assisting with embalmers' examination. Preparation hookworm bulletin. Investigation sanitary nuisances Springfield and Lackawanna Ave. Preparation hookworm poster. Investigation typhoid fever St. Johns Park.
June 1-5	Key West	Monroe	Official trip with State Health Officer.
June 7	Miami	Dade	Visit to isolation hospital. Inspection of rooms offered for laboratory.
June 8-12	Jacksonville	Duval	Routine office work. Investigation reported typhoid at Ortega, St. Johns Park and Fishwiler Park. Inspection conditions near distilleries vicinity Ostrich Farm.
June 13	Macclenny	Baker	Collection water specimen.
June 13	Lake City	Columbia	Vital Statistics.
June 14	Live Oak	Suwanee	Vital Statistics.
June 15-16	Gainesville	Alachua	Vital Statistics. Met with City Board of Health.

Date	Place	County	Nature of Occupation
June 17-30	Jacksonville	Duval	Routine office work. Investigation reported typhoid near S. A. L. shops. Investigation dairy nuisance.
July 1-31	Jacksonville	Duval	Routine office work. Investigation typhoid near S. A. L. shops and St. Johns Park; preliminary arrangements for typhoid dispensaries. Typhoid case moved from store in St. Johns Park to home. Investigation report acid. fish unloaded at A. C. L. docks near Talleyrand Ave. Arrangements for typhoid dispensaries at St. Johns Park, S. A. L. shops and Cummer's Mill. Investigation complaint fertilizer factories. Investigation sanitary nuisance 19th St. Visit to Lincoln and Lackawanna section for list of owners of property where typhoid had occurred. Inspection sewer Waller St. Operation typhoid dispensary in Cummer Mill section. 58 inoculations; supply of vaccine exhausted; 36 persons turned away.
Aug. 1-8	Jacksonville	Duval	Typhoid dispensary Odom's Pharmacy, 40 inoculations. Routine office work. St. Johns Park typhoid dispensary, 21 inoculations. Cummer Mill typhoid dispensary, 52 second inoculations, 29 first inoculations; total 81. Odom's Pharmacy dispensary, 34 second inoculations, 31 first; total 65.
Aug. 10	Live Oak	Suwanee	Model ordinance vital statistics and water supply and sewage disposal.
Aug. 11-31	Jacksonville	Duval	St. Johns Park dispensary, 18 second, 12 first inoculations; total 30. Routine office work. Cummer Mill dispensary, 50 third, 35 second, 72 first inoculations; total 157. Investigation L. & N. car from New Orleans arriving without seal of U. S. Public Health Service. Odom's Pharmacy dispensary, 27 third, 32 second, 16 first inoculations; total 75. Fumigation and release L. & N. car

Date	Place	County	Nature of Occupation
			held without seal. St. Johns Park dispensary, 13 third, 10 second, 1 first inoculations; total 24. Cummer Mill dispensary, 31 third, 68 second, 17 first; total 116 inoculations. Odom's Pharmacy dispensary, 30 third, 11 second; total 41 inoculations. St. Johns Park dispensary, 16 third, 1 second; total 17 inoculations. Cummer Mill dispensary, 73 third, 15 second; total 88 inoculations.
Sept. 1-7	Jacksonville	Duval	Routine office work. Public Health Exhibit work.
Sept. 8	Live Oak	Suwanee	Smallpox. 10 cases.
Sept. 9-27	Jacksonville	Duval	Routine office work. Investigation reported rabid dog, advised to shut dog up. Second visit to observe dog.
Sept. 28-30			
Oct. 1-13	(Out of State, leave of absence). Part time spent in Atlanta, obtaining exhibit material.		
Oct. 14-19	Jacksonville	Duval	Routine office work. Investigation reported diphtheria Phoenix Park. Work on preparation public health exhibit.
Oct. 20	S. Jacksonville	Duval	Investigation reported diphtheria. Interviewed City Health Officer.
Oct. 21	Jacksonville	Duval	Routine office matters.
Oct. 21	S. Jacksonville	Duval	Arranged with City Health Officer for inspection school children connection with diphtheria situation.
Oct. 22-31	Jacksonville	Duval	Routine office matters. Continued work preparing exhibit. Release swabs 2 diphtheria cases S. Jacksonville. Inspection premises isolation hospital and arrangement made for repairs. Investigation stagnant water complaint, S. Jacksonville.
Nov. 1-20	Jacksonville	Duval	At office. Routine work. Preparation of public health exhibit. Investigation diphtheria on Kings Road. Second visit to diphtheria on Kings Road. Diphtheria Kings Road released. Preparation of hall for installation of Florida public health exhibit at Southern Health Exhibition. Installation of exhibit.

Date	Place	County	Nature of Occupation
Dec. 1-30	Jacksonville	Duval	Routine office work. Supervision of exhibit at Southern Health Exhibition. Attendance at meetings of A. P. H. A. Investigation contagious diseases outside city limits. Supervising removal of exhibit from Morocco Temple. Preparation of additional exhibit material, and arranging for crating for road travel. Preparation of blanks for obtaining pellagra data.

Respectfully submitted,

C. H. DOBBS,

Assistant to the State Health Officer.

TABULATED SUMMARY OF ANTI-TYPHOID IN-
OCULATIONS ADMINISTERED AT FREE DIS-
PENSARIES OPERATED BY THE STATE
BOARD OF HEALTH, JULY 30 TO
SEPTEMBER 10, 1914

(1) BY DATES

Date	Dispensary Location	Inoculations			
		1st	2nd	3rd	Total
July 30, 1914	Cummer's	57	0	0	57
August 1, 1914	Lackawanna	40	0	0	40
August 4, 1914	St. John's Park.....	21	0	0	21
August 6, 1914	Cummer's	29	50	0	79
August 8, 1914	Lackawanna	31	35	0	66
August 11, 1914	St. John's Park.....	12	18	0	30
August 13, 1914	Cummer's	72	34	47	153
August 15, 1914	Lackawanna	16	30	27	73
August 18, 1914	St. John's Park.....	1	10	12	23
August 20, 1914	Cummer's	17	70	32	119
August 22, 1914	Lackawanna	0	11	30	41
August 25, 1914	St. John's Park.....	0	1	16	17
August 27, 1914	Cummer's	0	15	73	88
Aug. 24 to Sept. 10	State Board of Health Bldg.	7	7	24	38
Totals	All Dispensaries.....	303	281	261	845

(2) BY LOCATION

Place	Number of Dispensary Days	Inoculations			
		1st	2nd	3rd	Total
Cummer's (Carswell's Pharmacy)	5	175	169	152	496
Lackawanna (Odum's Pharmacy)	4	87	76	57	220
St. John's Park (King's Store)	4	34	29	28	91
State Board of Health Building	17	7	7	24	38
Totals	30	303	281	261	845

(3) REACTIONS

Number Persons Inoculated	Number of Inoculations	Average Age	Reactions Reported				Total Number Reports
			"None"	"Mild"	"Moderate"	"Severe"	
303	845	21.3	477	210	51	6	744

REPORT OF DR. C. T. YOUNG

Plant City, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to submit herewith my report for the year 1914. Since May 1st, the date of my re-employment by the Board, I have been almost continuously engaged in campaigns or investigations. A few of these details because of some rather interesting conditions attending them, have been selected for discussion and an effort has been made to eliminate as far as possible the tediousness and repetition which characterizes sanitary reports.

Shortly after re-enlisting with the Field Service of the Board, Dr. Diggett and myself were detailed to Marion County, with Ocala as headquarters, for the purpose of conducting an educational campaign on the prevention and eradication of *hookworm*, *typhoid* and *malaria*. We were joined there by Dr. W. P. Crigler, Assistant to the State Health Officer for that District, who, when not away on regular duties, very generously cooperated with us in the prosecution of the work. In the absence of Dr. Diggett I take the liberty of submitting a brief summary of some aspects of the work, as detailed reports are already on file.

It was our plan to take the County as a unit for the work, and then:

1. Show the people of that District by inspection and backed up by microscopical observation, that the *hookworm* disease was prevalent among them; review with them, both publicly and privately, its devitalizing effects; and endeavor to impress upon them that it is an infection, not only curable but preventable as well.

2. To make an inspection of the schools of the more populated centers, together with toilet facilities of these districts, for the purpose of ascertaining those accessible points most in need of a dispensary—the “clearing house” or station for this particular work.

3. To conduct an educational campaign on a number of such preventable diseases as *hookworm*, *tuberculosis*, *typhoid*, and *malaria*; to offer every person a free microscopical examination for *hookworm*, and the free treatment to those found to be infected. Information was to be given to all requesting it, when founded upon public health problems.

4. To make a special effort to correct the menace of soil pollution and sewerage borne diseases, and to impress upon all attending the importance of a wide-spread awakening to the dangers emanating from insanitary conveniences. The essentials in the construction of sanitary toilets were to be gone into, and the importance of keeping these privies in a clean and safe condition, was to be one of the goals of our efforts.

5. To secure the endorsement and support of the local medical men, newspaper editors, school teachers, and public spirited citizens, and their assistance in pushing the work into the more remote sections. Our aim was not only to treat as many cases as possible, but to so push information of a preventable nature as to minimize the percentage of future infections and re-infections.

1. The people, through wide distribution of articles in papers and magazines, were more or less familiar with the disease, but decidedly indifferent in some sections to its prevalence, and altogether too apathetic to its impoverishing effects. Dispensaries during the first few weeks were poorly attended. The schools had closed and most of, I might say practically all, the children in the rural districts were busy assisting in the gathering and packing of vegetables for market.

2. An inspection, followed by a microscopical examination, showed the disease less prevalent in towns with sanitary sewerage systems, where there were side walks, and the habit of children going barefooted less common. As was to be expected the rural districts, enjoying practically none of these advantages, showed a very high per cent of infection. The toilet facilities in these sections had practically no sanitary rating, being merely places of concealment.

3. The educational efforts were well received by those we were able to reach. A great many in whom there was no evidence of the infection attended the dispensary meetings,

The Hookworm
Campaign in
Marion County

The Plan.

The Results.

listened to the talks, saw the demonstration, and returned later with specimens for examination. On other days they came back with friends who were equally as enthusiastic. All of the literature we had available for distribution was gladly received. Advice and information was cheerfully given to all who requested it, on any question coming under the jurisdiction of the Board.

4. As will probably always be the case, the most difficult obstacles encountered were in our efforts to put an end to soil pollution, and to convince the people of their great need of sanitary privies. Despite continued insistence, followed by the wide distribution of literature giving the fullest information, we were unable to detect any appreciable results. In many instances the bare-footed child, regardless of protests, continued to go barefooted, and the old open surface toilets still stand to the eternal menace of the neighborhood. One often wonders if there will ever arise a modern Samson, strong enough to pull down the pillars of these filthy temples of Cloaca, and free the people, in so doing, from their disease spreading activities.

5. A pleasant feature of the work was the whole-hearted cooperation given us by the medical men, editors, school teachers, and other public officials. I am quite sure that the ultimate good resulting from such campaigns as this, will come from the continued activity of these good people who live on the ground, as well as those who come after them, as doubtless many generations will pass before the subject of our campaign meets with its final accomplishment.

While engaged in looking into an epidemic of fever, I received the following telegram:

"Kissimmee, Fla., June 16, 1914.

Dr. C. T. Young,

Care San Juan Hotel, Orlando, Fla.

Come to Kissimmee on important health matters.

(Signed) Dr. M. J. Hicks, County Agent."

A conversation was held with Dr. Hicks over the phone, and it was agreed that it would be advisable to hold a public hearing in his office the next day, as it had been charged by several citizens that one of the septic tanks of the local sewer-

Investigation of
Kissimmee Septic
Tank Problem.

age system, through failure to work properly, had become a nuisance.

After some delay on the day appointed, there appeared before the doctor and myself several citizens of the town, five men and one lady, some of whom represented one of the local civic organizations. Each was given a hearing. Their complaints all centered around the declaration that one of the septic tanks had not been working satisfactorily, and that as a result the sewage was going through it unchanged; that occasionally those passing near, or living close by, were made very uncomfortable by the putrid scent, or noisome odors, emanating therefrom. It was further stated that a case of malaria had been produced in a house a block away. A report of an analysis was exhibited by a layman which showed that on June 6th "1 cc of the effluent contained 2,425,000 bacteria. Of these 10,000 appeared to be B. Coli. In the fermentation tests made by us, gas was produced by 1-10 cc of the water in lactose bile media, but no gas was produced in 1-1000 cc of the sample" (it was not stated in the report that the specimen was the effluent from a septic tank). The complainants were of the opinion that the tank should have purified the sewage, and convinced me, by their words and manners, that they thought the town had been handed a "gold brick" of no mean proportions.

It was explained to those present that the action of a septic tank was a preliminary or partial one, resulting in the liquefaction, not purification, of sewage; and that accompanying this process there was generally an odor, which at times was more or less objectionable. It was further explained that the destruction of bacteria was about as variable and spasmodic as the action of the tank itself. Attention was called to the fact that at times, when large quantities of laundry water containing bleaching powder was discharged into sewers, the tank would often be put out of commission for days, when undigested sewage would be passed through. Quite often on such occasions it would become necessary to re-inoculate the tank, in order that its septic action might be continued.

The tank, which is one of the Cameron type, is located about a half mile to the southwest of the center of the town, and

The Examination.

south of the main line of the A. C. L. R. R., and about 300 feet from the shores of Lake Tohopekaliga. It was designed by N. A. Kramer, of Magnolia, Miss. It is rectangular in shape and of the following dimensions: 6 feet deep, 20 feet wide by 47 feet long. It is of closed cement construction and is sunk about a foot beneath the surface of the ground. Sewage from the main enters the first compartment, or grit chamber, through 4 pipes and passes into the second, or digesting chamber through a system of syphons, and so on to the third chamber or discharge compartment. The sand had been recently removed from the grit chamber. According to an expert on sewage systems who had recently examined the tank, the sludge and scum were of such thickness or depth in the digestion chamber as to indicate that the plant was working properly. There was no odor about the tank or its effluent which was flowing from a break in the pipe line some 175 feet away. Samples of both affluent and effluent were collected under the usual precautions on two different occasions at about 1 p. m. In each bacteriological examination the bacterial content was greater in the effluent than the affluent. Because some of the phenomena noted were contrary to that generally expected, it occurred to me that it might be well to discuss some of them more in detail.

Septic action.

This action, as defined in the patent granted the Cameron Septic Tank Co., of Chicago, Ill., is "the process of liquefying the solid matter as contained in sewers, which consists in the secluding a pool of sewage, having a non-disturbing inflow and outflow, from light, air, and agitation until a mass of micro-organisms has been developed of a character and quantity, sufficient to liquefy the solid matter of the flowing sewage, the inflow serving to sustain the micro-organisms, and then subjecting said pool under exclusion of light and air and a non-disturbing inflow and outflow to the liquefying action of the so-cultivated micro-organisms until the solid organic matter contained in the flowing sewage is dissolved."

It is seen, therefore, that septic action is merely a decomposition, which is accomplished through bacterial agencies, with a production of gas and the breaking up and the partial liquefaction of the solid matter. This decomposition is due

almost entirely to anaerobic bacteria. It is held by the leading authorities that such a treatment of sewage should be a preliminary one to further purification, except where it is possible to discharge the septic effluent into some non-usable body of water of sufficient volume to prevent its becoming a nuisance. To many examining the clear and crystal-like effluent coming from these tanks it appears to them that the sewage has been purified, instead of being merely liquefied.

Noisome odors or disgusting stench often arise either from these tanks or the effluent leaving them. Where the moist scum is exposed they come more from it than from the sewage itself. Often the flow of the effluent from the plant is obstructed and if there remains undigested matter in suspension septic action begins again with its attending smell and a nuisance is produced which is charged against the system. The degree of odor accompanying the septic process appears to be variable, in fact some of the largest installations are free from it altogether, while about others it is decidedly objectionable. Among some of the factors which are thought to influence it are the nature of the sewage applied, the amount of minerals in the water carrier, and lastly it is a theory of one of the State's leading experts that it is due to the action of the aerobes in a disturbed pool of sewage.

Odors.

It was noted, as previously mentioned, in the Kissimmee tank examination that the bacterial content was higher in the effluent than in the applied sewage. For the reason that little seems to be known about it, I suppose, it has been rather difficult to get any reliable data on the extent to which disease organisms are destroyed in these tanks. The following from "Sewage Disposal," by Kinnicutt, Winslow and Pratt, page 144, gives a very good summary of our present information on this subject: "The opinion that septic action destroys pathogenic bacteria has been expressed by various observers. This is true only to a limited degree, and no reliance should be placed upon such an action where sewage is to be purified with a view to protecting a water supply. Of course, any process which removes suspended matter from sewage, removes to a corresponding degree the bacteria which are attached to the solid particles. The claim that septic action destroys patho-

Purification—
Bacterial

genic bacteria to a greater extent than that just mentioned is, however, based on certain theories of bacterial antagonism, which have not yet been placed on a definite basis. Furthermore most of the experimental evidence has indicated that such bacterial antagonism, if it exists at all, cannot be depended upon to any considerable extent."

Septic Efficiency

According to these experts the first test, in judging the efficiency of septic treatment, is the reduction of suspended solids, measured by direct comparison of the affluent with the effluent. Tanks located in different sections of the country show a reduction ranging all the way from 56 to 70 per cent. A rough idea of this can be gained by taking a sediment glass full of the applied sewage and comparing the precipitate which forms with that of the effluent.

Their second test is the determination of the amount of the liquefaction of the suspended solids. Assuming that the tanks effect the removal of from 50 to 70 per cent. of the suspended solids, under favorable conditions, the rate of the remainder must be ascertained. How much is stored as sludge and how much is reduced to the liquid or gaseous forms? Evidence before the English Royal Commission indicated widely varying results for the different tanks.

In conclusion, it is remarked by them, that to determine the strength of sewage as well as the efficiency of any process of sewage treatment, chemical, and occasionally bacterial examinations, are necessary. "The main purpose in any method of sewage disposal is the elimination of offensive decomposition; hence the study of putrescible organic matter by the nitrogen and oxygen consumed determinations, and by special putrescibility tests constitutes, therefore, the most important problem in sewage analyses."

The investigation of the prevalence of typhoid fever at Orlando, Fla., was made at the request of Dr. P. P. Pillans, City Health Officer, to Dr. Joseph Y. Porter, State Health Officer.

The investigation was begun June 6th, and completed on the 23d of the same month (1914). It comprised a sanitary

NOTE: The writer desires to express his appreciation of the counsel and assistance given him by Dr. Hicks in this detail.

survey of the water supply, the collection of specimens of water for bacteriological examination to determine sewage pollution, an epidemiological study of the data obtainable from the attending physicians regarding the cases of the diseases under their professional care both past and present, an inspection of the sewage system (that at present in vogue as well as that soon to be installed), of dairies, groceries, cold drink stands, restaurants, lunch stands, bakeries—in short, the study of the usual sources and avenues for the dissemination of the infection.

Omitting the discussion of the sources and means of transmission of typhoid fever, which was written merely to assist the laymen to a better understanding of the conditions confronting them, we pass at once to the epidemiological study of the infection.

There is no department of vital statistics maintained by the City Health Department. To get a record of the health of the municipality for some months past it was necessary to visit the individual physicians. These gentlemen very kindly and promptly placed the desired memoranda at my service. From them it was learned that the city had been practically free from the fever for several months until last March, during which month a lady came up from Tampa, ill with the disease. Since that time eighteen cases had developed, with one death.

The average death rate for all the cities in the registration area for typhoid during 1908 was 25.8 per hundred thousand. Orlando's population was given at eight thousand; her typhoid mortality computed for the hundred thousand is 12.5.

Deducting four cases which were either brought there for hospital treatment, or contracted the malady at other places and returned to their homes before the development of the fever, we have left some fourteen cases which it is reasonably certain contracted the infection in the city. This gives us a rate of occurrence of 1 case to every 571.4 of the population; a case mortality of 7.14 per hundred. When compared to those of other districts of the registration area these ratios and averages are found to be unusually low.

Time of
Occurrence and
Extent of
Outbreak.

Investigation of
Typhoid Fever
at Orlando, Fla.

With reference to the day of the month the time of occurrence or development is as follows:

March 27*.....	1 case
April 7, 15*, 16, 25.....	4 cases
May 1, 1*, 21, 23, 23, 25, 26, 27, 31.....	9 cases
June 1, 3, 11, 12*.....	4 cases
Total.....	18 cases

*Out of town cases.

The distribution of the cases according to age is interesting as well as significant. From the youngest to the oldest it is: 14, 16, 16, 17, 17, 19, 23, 25, 25, 32, 45, 49, 50 and 53 years respectively.

Those affected, it is seen, were in the active or robust period of life.

Here again is another rather unusual coincidence.

Sex and Color

White		Colored	
Males	Females	Males	Females
8	2	2	2

71 per cent of the total number and 80 per cent of the whites were able-bodied men who spent their time during the day in the business section. Some of them were members of large families. In only one instance was there more than one case of the infection present in these families that was not attributable to contact.

Diagnosis.

As an aid to diagnosis the Widal agglutination test was made in all instances where the drop of blood was procurable. The only exception was in the case of a young lady who refused to allow the attending physician to take the specimen; he did the next best thing and had a number of Diazo tests made. They were all positive.

The results of the Widal's for the whites were:

Positive for eight
Negative for one

For the colored:

Positive for two
Negative for two

All cases according to records were clinically positive—exhibiting the majority of the diagnostic signs and symptoms. Where negative agglutination test had been reported by the laboratory it was suggested that other specimens be secured

and that, in addition to the test for typhoid, it be made for paratyphoid A. and B. and for the colon infections.

Of the fourteen cases no data was obtainable from four of them regarding the use of milk. For the remaining ten it was:

Discussion of
Epidemiology.
Milk.

Don't use it at all.....	1
Tampa milk and Westcott's.....	2
Rarely use it, source not given.....	1
Sellers, cor. Central and Parramour Sts.....	1
Malted milk, DeLaney's Drug Store.....	1
Willet's Dairy.....	1
Magruder's	1
Link's	1
Use it, source not given.....	1

An inspection of all the dairies was made in company with the Commissioner in charge of Sanitation, Mr. Clark Robinson. So far as we were able to ascertain there had not been a case of fever among the employes or upon the premises of the different dairies. Notes were taken of the sanitary conditions and some special recommendations were made to the City Commissioners regarding the improvement of the milk supply.

Of the fourteen cases practically all of them were accustomed to use ice cream and cold drinks. I am of the opinion, because of some conditions to be reported under another heading that suspicion can be attached to this practice.

Ice Cream and
Soft Drinks.

Though in general use no fault could be found with the ice. It was made from distilled water and should as a consequence be free from bacterial impurities. Careful inquiry at the plant failed to bring to light a history of any illness of an enteric nature among those who were engaged in the handling of the product.

Ice.

An inspection of the business section where practically all of the cases had spent their working hours and were accustomed during this time to patronize the cold drink stands, lunch counters and restaurants convinced me that these insects were the most probable cause of the spread of the fever. The greatest number of cases had developed at a time when they were most prevalent; when the weather was unusually warm and dry; when the floating population had been reduced to a minimum, thus giving a greater condensation to the amount of infection, which generally speaking is always present. The toilets were all open surface privies placed upon alleys to the rear of the business houses. While furnished with buckets

Flies.

for the collection of excrement, none of them were fly proof. About each and every one of them flies were swarming. On one of the principal alleys there were three of these privies within fifty feet of an ice cream parlor, which was insecurely screened. From one toilet, not over twenty feet away, I looked through an open window into an ice cream parlor. Pans of cream were sitting on the table ready for the freezer, flies were swarming about everywhere while a very considerable number had already begun the feast. Farther on we came to a bakery. The rear door was open. Flies were swarming about on the floor. Standing in the door eight privies were counted within a distance of two hundred feet. In this same locality complaints had been coming in that some of the cess pools had been allowed to overflow. But few of the places handling food supplies were keeping their screens closed properly, with the result that flies were noticed in all of them. Probably some typhoid carriers have been using the privies of this section which are so carelessly constructed that flies have access to the dejecta and then to the food. The pathetic typhoid story of *flies, filth, food, fever and often funeral*, in spite of its weighty accumulation of evidence, is another part of our sanitary primer which seems to fall lamentably short of an essential popular appreciation.

Contact.

One case gave a history that the disease had developed some sixteen days after another member of the family had contracted it. Association of the two had been intimate; the house was unscreened. There was no evidence that the discharges of the first patient had been properly disinfected. No precautions had been taken by those nursing the patient or handling the fomites.

Carrier Cases.

In another family it was reported that three cases of fever had developed among the different members, while living in the same house during the last six years. It is more than probable that in this household there is a carrier.

Sanitary
Conditions.

Of the fourteen cases:

- Six lived in screened houses
- Six lived in unscreened houses
- One lived in a partly screened house
- One gave no record

Five of these houses were connected with cess pools. Sewage.

Seven of these houses used the ordinary privy.

Two gave no data.

Of those having cess pools it was reported that two of them overflowed occasionally. They were so constructed as to prevent seepage. The excreta from typhoid cases was properly disinfected in over half of the instances; indifferently so in three and not at all in the remaining four cases.

Twelve of the fourteen cases used city water, two got their supply from local pumps. Water Supply.

The water supply for the city is obtained from Lake Highland. This lake is located a mile to the north of the city. It is slightly oblong in outline, being narrowest at its center. It is about seven-eighths of a mile in length, from half to a quarter of a mile in width and varies in depth from a few to fifteen feet. It has no visible outlet.

Three families live on the water shed, most of which is owned by private parties. The S. A. L. Ry. runs along the north side and on the west there is a street over which quite a bit of traffic passes. The lake shore is sandy with the exception of that on the north side, which is rather mucky. At several points along the shore I noticed logs, two boats were tied to landings and at other places the tracks of domestic animals were observed.

The pumping plant is located at the southwest part of the lake. The intake pipe extends some eighty to a hundred feet from the shore. The manager of the plant tells me that he pumps from 600,000 to 1,500,000 gallons of water a day, depending upon the warmth and dryness of the season. An average pressure of fifty pounds is maintained.

At this time the water is rather low in the lake. They have had some trouble with algae and at different intervals have been compelled to give the water a treatment of copper sulphate.

Specimens of water were collected under the proper precautions and forwarded to the laboratory at Jacksonville for examination for sewage pollution. The results were as follows:

June 16, 1914.

Laboratory No. 76637, City Supply, Intake Pipe.

Laboratory No. 76640, Ice.

Two of the samples sent in by you have been examined and show no evidence of contamination.

(Signed) HENRY HANSON,
Bacteriologist.

June 18, 1914.

Laboratory No. 76639, Bottom of lake near intake pipe.

Sample of water submitted by you from above source has been examined and shows evidence of contamination.

(Signed) HENRY HANSON,
Bacteriologist.

June 20, 1914.

Laboratory No. 76638, Lake bottom, 200 ft. from boat house.

Sample of water submitted by you from above source has been examined and shows evidence of contamination.

(Signed) HENRY HANSON,
Bacteriologist.

It will be noticed that two of the samples which were collected from the bottom of the lake showed evidence of contamination. In collecting the specimens some of the sediment from the bottom of the lake had gotten into the bottles. In view of this together with the fact the contamination was thought at the time to be due to the presence of harmless acid and gas producers which are commonly found in the bottom of fresh water lakes, other specimens were collected daily and forwarded to Dr. Hanson with a request for a qualitative and quantitative estimation of the bacterial content. His reports are as follows:

June 24, 1914.

Laboratory No. 76904, Water, City Supply at Intake Pipe.

Sample of water submitted by you on June 19th has been examined and we find no evidence of sewage contamination. From the result of this examination we should judge that the water is very good. It has a low bacterial count.

(Signed) H. HANSON,
Bacteriologist.

June 29, 1914.

Laboratory No. 77021 and No. 77022, Water near Intake Pipe—City Reservoir.

The two samples of water which you sent in on the 20th and 21st have been examined and found to show evidence of sewage contamination. The water I notice is taken near the intake pipe of the City Reservoir. The bacterial count, however, is not very high.

(Signed) H. HANSON,
Bacteriologist.

July 8, 1914.

Laboratory No. 77120, Water, City Supply, Intake Pipe.

The sample of water received from you on the 26th has been studied to some extent and found to show *B. Coli* present in ten cc. samples.
* * * *

(Signed) H. HANSON,
Bacteriologist.

The last three reports came in after the investigation had been completed. Results had been gone over previously and it had been reasonably determined that the pollution of the water supply was a negligible factor in the prevalence of the typhoid under consideration. While this is true at present the possibility of its becoming a menace of tremendous consequence in the future is decidedly apparent. And with this thought in mind, I am amending my recommendations to the effect that the city install at no distant date a slow sand intermittent filtering plant, for the purpose of removing this irregular or inconstant source of pollution from its water supply.

In the past the sewage of Orlando has been deposited mostly in open closets, cess pools, and a few modified septic tanks. The Sanitary Commissioner estimates that there are some 250 open toilets in the city, the same number of cess pools and modified septic tanks for the use of private residences. The construction of these accessories has been mentioned previously. Depending upon the frequency of use they are cleaned from one to three times a week. The city has just installed a modern sanitary closed sewer system, a description of which is omitted for lack of space. Sewage Disposal.

1. Typhoid fever is not alarmingly present in Orlando. Conclusions.
An investigation of other towns where similar conditions obtain would probably show the infection to be present, with about the same ratio of occurrence.

2. The most probable source of the fever has been a defective sewage disposal with the flies as the transmitting agent. One case has resulted from contact, another has probably been infected by a carrier.

3. The disease shows signs of abatement. Four cases were reported this month against nine last month (May and June, 1914). The elimination of the open closet, the extermin-

nation of fly breeding places, the more rigid protection of food supplies and an enforcement of the proper disinfection of the home case will reduce the prevalence of the fever to a minimum. All these details can be worked by the city board of health.

In conclusion I desire to express my appreciation of the very generous assistance given me during the detail by Dr. P. P. Pillans, City Health Officer, Mr. Clark Robinson, City Commissioner in charge of public health and rural sanitation, the local physicians together with the newspaper men. During the entire time of the investigation these gentlemen gave me their whole-hearted cooperation.

At the request of Dr. Pillans and Mr. Clark, I appeared before the City Commissioners, reviewed with them the cause of the fever together with the agencies in its transmission, the results of the investigation conducted in their city, closing with the following recommendations:

Since eternal vigilance is the price of health, it is recommended:

1st. That the city further safeguard its water supply by the acquisition or control of the water shed. The removal of logs and muck from the shore line and some sections of the bed would very materially enhance its activities as a filter bed. The flow of surface water from the street on the west side and from the right of way of the S. A. L. Ry. should be intercepted by an embankment or wall. A bacteriological examination of the water at regular intervals is an approved method for the determination of sewage pollution. (Later in view of some later findings, I would add that the city install at an early date as practicable a modern filtration plant.)

2nd. That all open surface toilets within reach of the mains be demolished and the owner be required to install sanitary water closets. That all insanitary open privies remaining after the installation of the sewage system because of inaccessibility to mains or laterals be condemned and the owners of these accessories be required to rebuild them along sanitary lines by making them fly proof and water tight.

Cess pools should be abandoned or so constructed as to prevent seepage, and where they receive dejecta from typhoid patients disinfected with a solution of chloride of lime or carbolic acid. The substitution of a modification of septic tanks (better, Imhoff tanks) for small groups of houses which cannot be reached by sewage mains, is a better procedure.

Until some authority makes a more thorough study of the water strata, subterranean caverns and channels, it is most unwise to employ a drainage well as a means of disposal. The beneficent forces which break up sewage into harmless compounds are present only in the first few inches of the ground. The other factor, that of the enormous volume of the diluent and the practical disappearance of the sewage in that great underground sea is another subject for investigation rather than conjecture.

3rd. That the production and sale of milk should be under the rigid supervision and inspection of an experienced man. The dairymen appear as anxious as the citizens are for them, to furnish as pure a product as possible. The present and only test in vogue in Orlando, is the chemical test, that is, the determination of butter fats and total solids. This test is more useful to detect fraud, such as skimming and watering, than to give an index to the sanitary condition or cleanliness which surround the dairy in the collection and marketing of the milk. I would suggest that in addition to the chemical standard, you require both bacterial and inspection standards. All three are absolutely necessary for the successful control of the milk supply. As Rosenau has observed, "Milk is responsible for more sickness and death than perhaps all other foods combined. There are several reasons for this: (1) Bacteria grow well in milk, and therefore a slight infection may produce widespread and serious results; (2) of all foodstuffs it is the most difficult to obtain, handle and deliver in a clean, fresh and satisfactory condition; (3) it is the most readily decomposable of all our foods; (4) finally, milk is the only standard article obtained from animal sources consumed in its raw state."

4th. The continued and enthusiastic conduction of your fly campaign, the enlisting and cooperation of newspapers, clubs, ministers and public spirited citizens in the extermination of the breeding places of these winged pests, and the protection of all food and drink for direct consumption by screens so effectively maintained as to exclude their contaminating presence. These insects, through their habit of feeding and breeding often in typhoid dejecta and then walking over our food, have constituted the chief source of the dissemination and spread of typhoid in this State.

5th and lastly. In order that these recommendations regarding the water supply; the protection of the milk supply by both inspection and a thorough examination of its products; a prompt investigation of a dangerous sewage disposal; the disposal of garbage and the abolition of those conditions responsible for fly breeding; the safeguarding of food and drink; it is absolutely necessary that your health department be greatly enlarged and strengthened, and reinforced by such ordinances as are required for its successful operation. The remuneration of your City Health Officer should be more in keeping with the responsibility of the office; and such as would justify him in giving all of the many details of his work the necessary attention. Little can be demanded or expected from an official without authority, and whose compensation is so grossly inadequate to the importance of the service required. Such a department, properly maintained, could render a splendid service in its protection of the health welfare of the people.

Upon the report of a suspected case of typhoid fever or any other infectious or contagious disease he should visit the case as early as possible, assist if called upon in the diagnosis, with his laboratory facilities, and assure himself that all such measures were in force as might be demanded in the prevention of the spread of the infection. He could then turn his attention to an investigation of the source of the malady, and gather such data as an epidemiological study would require. A department of vital statistics could be maintained with the cooperation of the doctors in their prompt reporting of all cases of reportable illness, births and deaths. It would then

be possible to secure at any time reliable data on the health condition of your city for any period. A sanitary inspection should be carried on by an efficient man, trained in his work, of all places producing or handling food supplies, and of all conditions which are recognized as agencies in the production and spread of disease.

Finally, it is the duty of the health department to keep its public fully informed regarding the prevalence of disease as well as those measures which are necessary for their protection. The distribution of literature, instruction and inspection of schools, the use of newspapers and the giving of lectures for the education of the public, while inexpensive, are most efficient in the institution of protective measures and the reduction of sickness.

The study of the diphtheria situation in some sections of the State during the last few months has resulted in the accumulation of some data which I take it is not without interest to the profession in these districts as well as that in other parts of Florida.

As is generally known the product of the Mulford laboratories is placed on the market throughout the country at the following prices:

1,000 units.....	\$ 2.00
3,000 units.....	5.00
5,000 units.....	7.50
7,500 units.....	10.00
10,000 units.....	12.00

Diphtheria.

Cost of
Antitoxin.

By a special arrangement with the manufacturers antitoxin is furnished free to the indigent in Florida. A special rate is given the State and the druggist handling the transaction is allowed 10 per cent of the cost price to the Board. Both the doctor and the druggist are required to certify that the patient is indigent and the doctor, in addition, that he has received no compensation for his services. Many unwilling to acknowledge, because of a pardonable pride, their limited means, or endure the opprobrium which they imagine is heaped upon a recipient of charity, often undergo a very considerable personal sacrifice in order that they might secure the remedy by other means. The general public pays the regular price.

In several of the Southern States an arrangement has been perfected with a certain laboratory, turning out this specific whereby it can be furnished to all alike at greatly reduced prices. The man who does not wish to be considered a pauper can secure it at a figure that is not prohibitive and his neighbor, who is in better circumstances is relieved of the feeling that he has been "held up" every time he buys a package of the product. The contract made in these sections has reduced the retail price 74 per cent, and still allows a net profit of 10 per cent to the dealer. The system has been tried out for over two years, and has been found to work very satisfactorily. The reduced prices secured through the plan are as follows:

1,000 units.....	\$.50
3,000 units.....	1.35
5,000 units.....	1.95
7,500 units.....	3.00
10,000 units.....	3.98

The cost to the manufacturer according to Dr. J. J. Kenyoun, A. M. A. Journal, Vol. LXIII, No. 10, p. 862, in his own language is, "A careful estimate of the cost per thousand units, just after the precipitating method was introduced, showed that it ran from 6½ to 8¼ cents." By estimating the serum at 8 cents per thousand units and the cost of the package or container at fifteen cents, we have the following:

1,000 units.....	\$.22
3,000 units.....	.39
5,000 units.....	.55
7,500 units.....	.75
10,000 units.....	.95

Comparison of
Tabulated
Results.

1,000 units cost in Florida, \$ 2.00	Other States, \$.50,	Manufrs. \$.22
3,000 units cost in Florida, 5.00	Other States, 1.35,	Manufrs. .39
5,000 units cost in Florida, 7.50	Other States, 1.95,	Manufrs. .55
7,500 units cost in Florida 10.00	Other States, 3.00,	Manufrs. .75
10,000 units cost in Florida, 12.00	Other States, 3.98,	Manufrs. .95

Diagnosis.

While in some respects it is highly complimentary to the Board to observe the rather implicit confidence which some members of the profession have in the findings of the laboratory, yet this is most deplorable when upon investigation it is seen that in some instances the very careful and painstaking examination of the patient has been supplanted by a mere mechanical procedure, that of collecting specimens and send-

ing them off for a diagnosis. The ability to examine, consider and interpret and last but not least, act promptly has been surrendered to the scientist who sits on a stool, surrounded by microscopes, aniline dyes and culture media in a distant laboratory. Positive reports from such a trained and skilled observer furnishes in rather a pleasant way the key to the particular variety of remedial agents to be employed; but when reports of a negative or a doubtful nature are received from this specialist by our dependent brother who has fallen into the habit of disregarding bedside study, he begins to flounder in uncertainty and confusion and commences shortly a series of shot gun medications in a rather vain hope of relieving his patient.

Recently some serious mistakes have been made by the failure to disregard negative reports despite the presence of suspicious clinical indications. The efficacy of antitoxin is due largely to its early administration as well as the size of the dose employed. Again, because of a delayed mail service together with the time necessary in the laboratory for the cultural growth and examination, often two or three days have elapsed before the report is in hand. In the meantime a malignant case would have either died or drifted beyond hope.

A better plan for those not within easy reach of the bacteriologist from whom reports from swabs and cultures can be secured without much loss of time would be in all cases of throat trouble of a doubtful or a suspicious nature (and I might remark as is well known, that many of the most innocent appearance often are found upon a bacteriological investigation to be diphtheria) to give at once a dose of antitoxin of sufficient size and then take the swab and mail it to the laboratory. If it is diphtheria, the case will be well on the road to recovery when the report is received.

A plan is being tried out which has for its purpose the elimination of all unnecessary delays in the examination of swabs for this disease. With the cooperation of the local health officers and the field men it is planned to review with the local physicians in certain sections the technique required in the inoculation of tubes of blood serum at the bedside of the patient. It will often be possible when atmospheric tempera-

ture is favorable and a sufficient time has elapsed during transit to examine these specimens immediately upon their arrival and wire the results to the attending physician. It is estimated that from 18 to 36 hours will be saved by the successful operation of the plan.

Size Dosage.

Dr. W. M. Park states that only a single dose is required and so far as the mortality is concerned that it has given better results. He recommends 5,000 units for mild, 10,000 units for severe and 20,000 units for malignant cases. According to him it takes two days for one-third of the dose to be absorbed and another two days for the other one-third. After twelve hours there is little toxin in the body except possibly locally in the tissues. It is further stated that 10,000 units intravenously is worth 100,000 subcutaneously, and that by repeated tests it has been ascertained that doses ranging from 5,000 to 25,000 are of sufficient size; that 40,000 units will save any patient that 1,000,000 will. (Same issue Journal, page 863).

Schick Reaction.

In the publication of articles and their conversation about the streets too much publicity has been given to the subject of anaphylaxis and serum sickness among the laity by medical men. This almost negligible factor has come to be regarded in some neighborhoods as an invariable sequence to the administration of antitoxin. Only last week the writer saw a mother let her child go almost to death's door because she had heard that antitoxin had caused the death of the child of a friend living nearby. An investigation of the rumor showed that it was but an idle gossip. In view of this apprehension which exists together with the cost of the immunizing dose of antitoxin as well as the fact that such a dose is often unnecessary because of the presence in the individual already of a sufficient number of antibodies to protect him, it is thought that it would be wise for the Board to introduce and advocate as widely as possible the use of the Schick test as a preliminary procedure to the prophylactic administration of antitoxin.

Briefly, the test consists in the injection superficially into the skin 1-50 of the dose of diphtheria toxin fatal to a guinea pig. The reaction occurs generally under 48 hours and consists of a local redness and infiltration which on subsiding leaves pigmentation and scaling. Positive results do not indi-

cate with the same degree of certainty the absence of protective bodies since some individuals show the reaction in spite of the presence of these bodies. A negative result, however, always indicates the presence of protective bodies in sufficient amount to protect the individual. It is seen therefore, that by its use it is possible to eliminate all unnecessary doses of antitoxin for immunizing purposes and at the same time determine definitely those in whom it is required.

Schick's observations indicate that immunity to diphtheria exists at birth in about 80 per cent, reaches 50 per cent at one year and falls to 40 per cent at from two to five years of age and rises to 90 per cent in adults.

Through its employment the New York State Department of Health has determined that the immunity resulting from 1,000 units of antitoxin lasts from twenty-one to twenty-eight days; that from a second dose of the same number of units, only about a week; and finally that the immunity conferred by an attack of diphtheria is of short duration.

The following sets forth in detail my activities from April 1st (time of my appointment) to December 31st, 1914:

Date	Place	County	Nature of Occupation
April 1-5	Jacksonville	Duval	Conference regarding hookworm campaign.
April 6-30	Ocala Dunnellon Bellevue Citra Anthony McIntosh Fort McCoy Stokes Ferry Silver Springs	Marion Marion Marion Marion Marion Marion Marion Marion Marion	Preliminary publicity, hookworm campaign. Distribution of specimen outfits and inspecting schools; collection and examination of hookworm specimens; interview with physicians and public-spirited citizens in soliciting cooperation for campaign; talks regarding sanitary aspect of the work in these sections and endeavoring to enlist the support of the community for dispensaries.
May 1-10	Various places	Marion	Hookworm dispensaries.
May 11, 19, 25	McIntosh	Marion	Hookworm Dispensary.
May 12, 19, 26	Citra	Marion	Hookworm Dispensary.
May 22, 29	Bellevue	Marion	Hookworm Dispensary.
May 16, 23, 30	Dunnellon Sparr	Marion Marion	Hookworm Dispensary. Hookworm Dispensary.
June 1-7	Ocala	Marion	Headquarters during hookworm campaign.
June 4	Citra	Marion	Hookworm Dispensary.
June 5	Bellevue	Marion	Hookworm Dispensary.

Date	Place	County	Nature of Occupation
June 8-23	Orlando	Orange	Investigation typhoid fever.
June 17	Kissimmee	Osceola	Investigation sewerage problem.
June 19	Apopka	Orange	Investigation typhoid fever.
June 23	Kissimmee	Osceola	Collecting sewerage for examination.
June 23	Tampa	Hillsboro	At Tampa laboratory.
June 25	Orlando	Orange	Final inspection typhoid situation.
June 28	Lakeland	Polk	Personal inquiries among physicians regarding prevalence of typhoid.
June 30	Plant City and Alafia	Hillsboro	Investigation family suffering from smallpox and two white families infected with typhoid.
July 2	Vicinity of Plant City	Hillsboro	Visit cases typhoid. Sanitary advice given.
July 6	Kissimmee	Osceola	Collection sewage samples. Inspection of system together with a hearing of complaints.
July 8	Vicinity of Plant City	Hillsboro	Visited typhoid cases accompanied by attending physician. Assisted in an inspection of premises. Advised institution of usual preventive measures.
July 9	Turkey Creek	Hillsboro	Saw case pellagra with family physician.
July 12	Seffner	Hillsboro	Visited colored typhoid cases in country. Made study of case and gave usual advice.
July 12-15	Tampa	Hillsboro	Acting upon instructions of State Health Officer, reported to laboratory at Tampa for duty relieving chief bacteriologist and ass't bacteriologist during their vacations respectively.
Aug. 1-21	Tampa	Hillsboro	Assisting with bacteriological work in laboratory.
Aug. 23-31	New Orleans, La.		Detailed New Orleans for study of plague and plague operations.
Aug. 23	New Orleans, La.		Morning: Post mortem inspection of two suspected cases followed by an autopsy.
Aug. 24	New Orleans, La.		Attended conference of P. H. S. officers on the management of their campaign. Inspection, dissection and examination of rats for plague. Afternoon: Visit to plague hospital. Review of history and examination and inspection of clinical cases. Laboratory rat work.
Aug. 25	New Orleans, La.		Morning: Routine laboratory work. Evening: The same.
Aug. 26	New Orleans, La.		Morning: Inspection of carbon-monoxide fumigation of vessels for rats under service of Dr. Roberts. Evening: Inspection of unloading cargoes of bananas and loading of same on rat-proof cars.

Date	Place	County	Nature of Occupation
Aug. 27	New Orleans, La.		Morning: Routine rat work at the laboratory. Later: Conference with Drs. Rucker and Corput, managers of United Fruit Company's and competing companies regarding the certifying of shipment of bananas from rat-free vessels in rat-proof cars to Florida; and the agreement that these cars would not be reopened during the remaining of their stay in the city. Afternoon: Visited plague hospital to see new cases.
Aug. 28	New Orleans, La.		Morning: Routine rat work at laboratory. Afternoon: Inspection of rat-proofing accompanied by Dr. Creel.
Aug. 29	New Orleans, La.		Morning: Accompanied by Dr. DeVallin inspected several city blocks with view of studying the system of rat-proofing and methods adopted for the different buildings and the various kinds of construction. Afternoon: Routine laboratory work. Visit with Dr. Dowling of Louisiana State Board of Health.
Aug. 30	New Orleans, La.		Morning: Routine laboratory work.
Aug. 31	New Orleans, La.		Inspection of outgoing railway freight and manner of rat-proofing and certifying to of car under Dr. Corput. Autopsy at City Morgue. Spent half day in the district of Dr. DeVallin inspecting methods used to catch rats, kinds of traps, location, bating, system of collecting, tagging and forwarding to laboratory. Visited Charity Hospital and Turo Hospital. Went to Plague Hospital again to see new case.
Sept. 1	New Orleans, La.		Morning: Inspected the municipal filtration and treatment, municipal water plant of City of New Orleans. Afternoon: Routine laboratory work.
Sept. 3	Jacksonville	Duval	At executive office. Report to State Health Officer.
Sept. 4	Tampa	Hillsboro	Conference with Mayor over plague situation. Resumed duties in Tampa Laboratory.
Sept. 4-30	Tampa	Hillsboro	On duty at laboratory in Tampa. Assisting the bacteriologist in charge. Service routine.

Date	Place	County	Nature of Occupation
Oct. 1-31	Tampa	Hillsboro	Daily routine laboratory work. Rat examinations. Record of species and places where trapped. Dissection and search for microscopic evidences of plague. Staining specimens from glands, liver and spleen of suspects, followed later by guinea pig inoculation with these same tissues when warranted by evidence of positive or inconclusive nature. Special study of diphtheria. Average period of detention for the infected. Measures employed by the practitioners to free the throats, etc., of the bacillus with view to ascertaining the more effective of these agents. Checked letters on mail service. Observations on time consumed in getting out reports to men who send swabs from a distance and advisability of inaugurating a special outfit containing a tube of blood serum which could be inoculated at the bedside and make it possible thereby for these men to get reports from 36 to 24 hours earlier. Studies of the benefits to be derived from the use of Schicks test preceding the prophylactic administration of antitoxin. Morphological and cultural characteristics of Klebs-Loeffler bacillus.
Nov. 1-7	Tampa	Hillsboro	Routine duties in laboratory. Daily examination of rats submitted by the city. Continued observations on different phases of diphtheria situation, diagnosis, treatment and quarantine methods employed by the different medical men of the city. Recommendations regarding the furnishing of the health officers in three different towns with tubes of blood serum for bedside inoculation with view to testing the advisability of inaugurating special diphtheria container and placing it in the hands of those previously instructed as to the technique for its successful operation.
Nov. 7-13	Richmond, Va.		Attending Southern Medical Ass'n at own expense. Special permission from State Health Officer.
Nov. 13-25	Tampa	Hillsboro	Special detail, Tampa laboratory.
Nov. 27-30	Jacksonville	Duval	Assisting those in charge of State Board of Health Exhibit in the Southern Health Exhibition at Morocco Temple.

Date	Place	County	Nature of Occupation
Dec. 1-4	Jacksonville	Duval	Attending sessions of American Public Health Association. Assisting those in charge of Board of Health Exhibit.
Dec. 5-10	Jacksonville	Duval	Assisting with exhibit, and at close of Southern Health Exhibition, the packing and crating of the Florida exhibit, and such other details necessary to put in proper shape for road duty.
Dec. 17	Plant City	Hillsboro	Visit case typhoid near Plant City with attending physician.
Dec. 22	Lakeland	Polk	Consultation with attending physician over severe case diphtheria. Family opposing administration of diphtheria antitoxin.
Dec. 27	Plant City	Hillsboro	Consultation with attending physician severe case scarlet fever.
Dec. 28-29	Plant City	Hillsboro	Visit to all local physicians and collection of back birth certificates.

Very respectfully,

C. T. YOUNG,

Assistant to the State Health Officer.

REPORT OF DR. JAMES M. JACKSON

AGENT OF THE STATE BOARD OF HEALTH

Miami, Fla., Jan. 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—It becomes my duty to again report to you concisely the work of your agent for Dade County for the past twelve months. During the year we have had only one case of smallpox. That was in a white girl who came here early in January. This case was removed to the Isolation Hospital, but the girl became so alarmed and worked up that she left in a few hours, returning to her home in the north end of town. I immediately visited her and found that it was impossible to induce her to return to the Isolation Hospital. I therefore posted the house and warned the family against leaving the house or allowing anyone to enter same until the entire family was vaccinated. The case did splendidly and there was no spread.

There has been from time to time a case of diphtheria, particularly in Miami, but these cases have been so far between that it has been impossible to trace any connection between them.

During the summer we had no dengue and but a few cases of malaria. Typhoid cases were very rare and only a very few occurred during the entire year. The time of your agent has been largely spent in endeavoring to educate the people along sanitary lines, giving careful audiences to all complaints made and sound sanitary advice to all individuals. During the month of August, with your permission as you know, I visited New Orleans for three weeks and there observed the manner of eradicating rats and plague.

After I returned home I made an address before the Miami Board of Trade and gave one or two interviews to the newspapers and urged upon the people the eradication of rats from an economical as well as a sanitary standpoint. This has been fruitful of some results, but not, to the extent that I had hoped.

During the year the Model Vital Statistics ordinance has been passed by the City of Miami and also the City of Ft. Lauderdale, both cities being in my territory. As most of the physicians in my territory live or work in one or the other of these cities, I trust that the fact that they have to report within the cities will induce them to become more prompt in reporting births within the country.

During the year the Miami City Board of Health has been organized and your agent was honored with the presidency of same. The Board has done a great deal of work along proper sanitary educational lines, the adoption and carrying out of a model milk ordinance, screening ordinance for restaurants and fruit stands, inspection of markets and bakeries and many other important ordinances have been passed by the city upon our recommendation. We have endeavored to carry out a campaign of education; for, as you too well know, sanitary laws without proper education of the public as to their needs and necessities are very poor things, but when the public is aroused it is a very easy matter to receive proper ordinances and see that these laws are properly carried out.

I wish to congratulate you upon the high character of your HEALTH NOTES and also upon the fact that I find they are largely read and consulted by the laity as matters of education in sanitation and it has done and is doing much toward the proper sanitary education of the laity of the State and particularly in Dade County. I also think that your health bulletins in the press have been most helpful. It has been a source of great pleasure to your agent and the City Board of Health to note the splendid support that sanitation in general and the organization of the City Board of Health and its rules and regulations have received from the press of our city, as there is no better educator than the daily press.

I have visited from time to time, as time would permit, some of the smaller places within my territory and have endeavored to preach—not in a lecture, for I am not a public speaker—by personal interviews with members of the community the need of proper sanitation.

All in all this has been a most excellent year for Dade County, but I feel that it is only the beginning of what can be

done with the proper backing and support to improve the health and educate the people in sanitary science.

Respectfully yours,

JAMES M. JACKSON.

Agent of the State Board of Health.

REPORT OF DR. D. G. HUMPHREYS,

AGENT OF THE STATE BOARD OF HEALTH.

Fernandina, Florida, January 1, 1915.

DR. J. Y. PORTER,

State Health Officer, Jacksonville, Florida.

DEAR DOCTOR:—I herewith submit my annual report for 1914.

Nassau County has enjoyed another year of unusual good health, not a single case of diphtheria, scarlet fever, dengue fever or smallpox has been reported. There was less malaria, and of a milder type, than I have known for the past fifteen years, and while mosquitoes were unusually severe, they were mostly of a non-malarial type, and in Fernandina proper the houses are almost uniformly screened.

This mosquito question was gone into very thoroughly by the City Health authorities, and while the local cess pools, cisterns, water barrels, etc. were taken care of, no comprehensive plan was found for drainage or oiling on account of the large acreage to be covered. This matter is still being pushed, and I feel sure a solution will be found before next summer.

There were only five cases of typhoid fever, three of these being traceable to water contamination, the other two from sources unknown. Every precaution was taken in each case, each being screened and vaccine given to other members of the family and neighbors, when possible. Typhoid fever is growing less frequent each year in this county, due, I think, to the realization of our people to the important part played in the carrying of the disease by the house fly, and where formerly typho bacterine was sorely dreaded, now it is eagerly sought when a single case appears.

Tuberculosis, as I have stated in my former reports, is principally confined to the colored race. Only ten deaths occurred from this disease during the year. I think the new work taken up along this line is sure to accomplish great good, for our people are now ready for instruction.

There were only three cases of pellagra, one death and two recoveries.

As I stated in my last annual report, I thought the hook-worm was about cornered, but on my round of inspection this summer, I found a whole community in the western part of the county infected, but they readily agreed to treatment, with a very happy result.

The City Council of Fernandina and Dr. J. L. Horsey, City Health Officer, have co-operated most heartily with the State Board in general health matters, and especially in the catching and examination of rats so caught for plague infection, and in every way have given assistance to the comprehensive vital statistic plan, realizing what its perfection would mean to the State of Florida.

I made a round of inspection of the county during the months of June and September. I found Fernandina's sanitary condition good, with the best sewerage system, clean streets and plenty of pure artesian water. There remains the mosquito alone to be conquered, when it will be an ideal spot to live.

Callahan, Hilliard and the smaller towns are being drained and more attention being paid to sanitation each year.

I have very little specific work to report, because there were no quarantinable diseases, but I gave advice when needed and helped when possible in every health matter.

Respectfully,

D. G. HUMPHREYS,

Agent of the State Board of Health.

REPORT OF DR. RAYMOND C. TURCK

SURGEON IN CHARGE OF THE WORK UNDER THE
"CRIPPLED CHILDREN" ACT

REPORT OF DR. RAYMOND C. TURCK

SURGEON IN CHARGE OF THE WORK UNDER THE "CRIPPLED CHILDREN" ACT.

Jacksonville, Fla., Jan. 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Florida.

DEAR DOCTOR:—In accordance with your instructions I beg to submit the following report of the surgical and orthopedic work done under the direction of the State Board of Health during the year 1914.

Fifty-one cases were handled during the year, as follows:

Remaining under treatment from 1913.....	13
Admitted for treatment during 1914.....	15
Examined or admitted but discharged because of lack of facilities for treatment	23
Total	51
There were forty-six white and five colored children.	
Discharged cured during 1914.....	9
Discharged, improved, treatment incomplete because of inadequate equipment	7
Under observation or office treatment January 1915.....	3
There are in hospital at this date nine cases presenting the following conditions:	
Lateral curvature of spine, R. W.....	1
Tuberculosis of spine, A. N.....	1
Tuberculosis of hip, F. P.....	1
Osteomyelitis of femur, P. G.....	1
Osteomyelitis of tibia, A. F. D. S.....	2
Osteomyelitis of humerus, L. W.....	1
Spastic Hemiplegia, E. A.....	1
Talipes Equinovarus, U. K.....	1
The following pathologic conditions were presented:	
Poliomyelitis deformity and paralysis.....	8
Spastic Paralysis.....	9
(Hemiplegia 2; Diplegia 4; Paraplegia 3)	
Congenital Syphilis.....	5
Hare Lip and Cleft Palate.....	1
Tuberculosis of hip.....	6
Tuberculosis of knee.....	1
Tuberculosis of spine (Pott's Disease).....	3
Osteomyelitis	5
(Femur 2; Tibia 2; Humerus 1)	
Talipes Equinovarus.....	15
Talipes Equinus.....	1
Lateral curvature of spine.....	6
Muscular Dystrophy.....	3
Abscess of thigh.....	1
Multiple Arthritis.....	1

I beg to especially call your attention to the fact that of the thirty-eight new cases received during the year, but fifteen were admitted for treatment, while twenty-three were returned to their homes untreated and unimproved because we are not provided with the necessary equipment and trained workers to properly treat, or train, or educate non-operative types of orthopedic cases. Of the twenty-eight cases actually treated during the past year seven were sent home but partly cured: again because we did not possess facilities for following up our operative correction. So many of our cases present deformity due to some form of paralysis, that even after successful operative correction, it is necessary to institute gymnastics, exercises, joint manipulation, muscle training, etc., to develop the greatest possible function, as well as to prevent a recurrence of the deformity.

Cases not admitted because of lack of equipment.

In view of the fact that we do not possess the equipment necessary for developmental or educational treatment, in accordance with the instructions of the State Health Officer, I have recommended for admission only such cases as seemed amenable to reasonably prompt operative cure.

Including the cases recorded in the State work, I have records of more than fifty children in Florida who need, at the present time, institutional treatment for paralytic or other deformity or disability not curative by surgical operation alone, and these certainly form but a small percentage of the total number of crippled children in the state. It is unfortunate that the parents of most of the crippled children are unable to provide means to give the children the necessary developmental or corrective treatment, which in case of a spastic paralytic, for instance, is likely to cover a period of years. No properly equipped institution being provided by the State of Florida, and the parents being unable to afford the expense of keeping the children in a foreign institution, many children are therefore rapidly growing into incurability and a life-long helplessness, mentally as well as physically.

We need a ward or hospital completely equipped with a gymnasium, a kindergarten, a manual training workshop, a sun parlor and a play room. Many of the children, while incurable so far as a complete restoration to full physical vigor is

Need for orthopedic ward in hospital.

concerned, yet might be made into self-sustaining, useful citizens if they had half a chance. Crippled children are almost invariably industrious, anxious to learn, anxious to do things or make things, and almost always are of sunny disposition and easily managed. Because of their disabilities many cannot attend school, parents do not seem to think it necessary or are unable to teach them at home, their mental education is almost always neglected, and certainly effort is but seldom made to teach them useful self-sustaining occupations.

While the bodily ills of such children are being remedied or minimized, and while they are being developed physically, they should receive at least the rudiments of mental education; kindergarten and primary school work would be but a pleasure and a pastime for them, and at the same time they should have occupational training.

In Germany crippled boys are taught forty-nine different trades or occupations, and the girls twenty-six. With this range it is always possible to find some work that is adapted to the particular need or ability of the individual. It is manifestly impossible to give the required gymnastic training, manual training or kindergarten or primary school work in any general hospital. A special ward or institution is necessary not only to provide the necessary equipment but that the work, exercises, rest periods, etc., may be properly regulated.

In my report of the work for the year 1913 I suggested that a ward be erected in connection with St. Luke's Hospital in Jacksonville. Sketches of the proposed building and plans were submitted. Such a ward could be built and equipped for twenty thousand dollars, which is the amount already appropriated by the state legislature for this purpose. The suggested ward would contain eighteen beds for white children and six beds for colored children. Arrangements might be made with St. Luke's to maintain such a ward, provide nursing and general care; the State paying weekly or monthly a specified amount for each child treated; the general expense of the ward being paid by the hospital.

It would be necessary, however, for the State to provide a few special workers. We would need one operator for massage and gymnastics, preferably a woman trained in one

school work and manual training.

ward in connection with St. Luke's Hospital.

of the large orthopedic hospitals. We should have a kindergarten teacher who could also handle primary school work and manual training for girls. In addition, we should have a man to handle the manual training work shop, preferably one graduated from a school of good standing and who understands something of the necessary adaptation of trades or occupations to the capability of the individual.

The additional expense to the State in maintaining such a ward would be in repairs to the building and in salaries of the above mentioned special operators.

The ideal solution of the problem of the proper care and treatment of the indigent crippled children of the State of Florida would be a separate hospital building, maintained by the State of Florida. Such an institution could be erected and equipped for not more than fifty thousand dollars and would be sufficient for a number of years to come. It could be built so that it could be enlarged from time to time if necessity should arise. While an orthopedic hospital requires a few specialized operators, yet it can be managed economically because but few nurses are needed. One good nurse with a couple of colored maids can handle a ward of twenty children. No nurses' training school and no large force of nurses would be required. Such an institution caring for fifty children could be maintained for from twenty to twenty-five thousand dollars a year, which would be about the same or a little less than the rate per patient which the State is paying for its children under present conditions.

Separate State Orthopedic Hospital.

Should the Board care to consider such a hospital, and should they wish to try to get the necessary appropriation from the state legislature, I would be glad to work out preliminary plans of such a building together with an estimation of the cost of maintenance.

In this connection I may say that in casual conversation with some members of the present legislature, they have in every instance shown a keen interest in the work and have suggested that a bill appropriating money for the erection and maintenance of such an institution be drawn up and submitted to the next legislature.

A state hospital for ruptured and crippled children could

be made, in part, self-sustaining if rooms were provided for patients who were able to pay for hospital care. I have on my records at present a considerable number of children whose parents are able and would be glad to pay for hospital treatment if such an institution were available.

I desire to say that the general care and treatment received by these children in St. Luke's Hospital has been most satisfactory. While we have been unable because of lack of facilities to give them specialized treatment or training, yet every effort has been made not only to improve their actual physical condition but to make them as happy as possible. Practically without exception the children have improved very markedly in general health while at St. Luke's, even those sent out but partially cured have shown astonishing improvement in their general condition.

I desire also to especially mention my appreciation of the excellent care given the colored patients by Miss Oliver Webster, Superintendent of Brewster Hospital. While we have had but few colored cases, yet results have been invariably satisfactory.

I desire to express my appreciation of the constant help and cooperation given by the State Health Officer. His interest has made the work a pleasure.

I also wish to acknowledge the efficient and conscientious work of my associate, Dr. William Buffalow. Members of the visiting staff of St. Luke's Hospital have also cheerfully given their services whenever called upon; Drs. W. E. Ross and J. D. Love of the children's service, Drs. W. S. Manning and Norman Heggie of the eye, ear and nose service, Dr. J. H. Randolph of the nervous and mental service have especially rendered valuable aid.

Dr. L. W. Cunningham has taken the necessary X-ray pictures. He has done the work practically at cost, and his interpretation of the plates has been of substantial assistance.

Respectfully submitted,

RAYMOND C. TURCK.

In general, the actual work done during the past year has been satisfactory. Nine patients have been returned to their

Care in
St. Luke's
Hospital.

Case Histories.

homes cured. These include one case of abscess of thigh, one case of talipes equinus, one case of hare lip, two cases of joint tuberculosis and four cases of talipes equinovarus. Of the patients returned home partly cured, there were two cases of disability following Pott's disease of the spine, one of poliomyelitis, one of spastic hemiplegia, and three cases of muscular dystrophy. Twelve cases are now under treatment.

The following are brief histories of the cases treated (not including those examined and returned) during the year 1914:

CASE 1. P. A., white male, age four years, Greenville, Florida. Referred by Dr. J. F. Mixson. Admitted to St. Luke's December 1913 with tuberculosis of the right knee and ankle. Right knee flexed at an angle of 45 degrees. Treated by extension-traction, plaster casts, etc., until June 21, 1914, when he was returned to his home greatly improved in health and strength and with the local process apparently arrested.

CASE 2. R. L., white male, age ten years, Jacksonville, Florida. Admitted to St. Luke's in July 1913 with tuberculosis of right hip joint. Treated by extension-traction and plaster casts. Discharged apparently cured June 26, 1914.

CASE 3. C. K., white male, age six years, Fenholloway, Florida. Referred by J. H. McCullers. Admitted to St. Luke's October 22, 1913 with double club foot, neglected type. Operation St. Luke's Hospital October 28, 1913. Treated until March 8, 1914, when he was returned to his home cured with feet in excellent condition. Function restored.

CASE 4. B. S., colored male, age three years, Jacksonville, Florida. First operation in Brewster Hospital January 1913. Under treatment with casts and braces until May 21st, 1913, when case was lost from observation. Feet neglected by parents with consequent relapse to former condition. Second operation Brewster Hospital October 27, 1913. Resection of bones of both feet. Treated in casts and braces until March 8, 1914, when the case was discharged cured. Position and function restored.

CASE 5. J. P., colored male, age two years, Jacksonville, Florida. Admitted to Brewster Hospital October 25, 1913 with double club foot. Operation October 27, 1913 on tendons and bones of both feet. Treated in plaster casts and adhesive dressings until April 1914. Discharged wearing braced shoes; position and function restored.

CASE 6. V. A., white male, age seven years, Christina, Florida. Referred by Dr. C. C. Pearce. Flexion contracture of both thighs and legs and lateral curvature of spine. Full history in twenty-fifth annual report for 1913. Treatment continued until July 1914, when the child was returned home in excellent general condition, able to walk erect slowly without support. This child should have had further treatment and training, which we are unable to give because of lack of gymnasium and manual training, work shop.

CASE 7. F. P., white female, age ten years, Jacksonville, Florida. Admitted to St. Luke's Hospital October 1913 with tuberculosis of the left hip joint of five years' duration. Patient was treated in extension-traction until February 26, 1914, when first operation was done on joint. At this time it was found that the head of the bone was entirely destroyed. The diseased bone was removed and the limb placed in lateral plaster splint in abduction. Drainage was very free; wound refused to heal. Secondary

operations, removing more diseased bone, were done April 28, 1914 and October 8, 1914. The wound is still draining but there is a marked improvement in the local condition and the child has improved decidedly in general health and strength. She is still under treatment and after the disease has been arrested an arthroplasty will be done to provide a hip joint.

CASE 8. A. F., white female, age thirteen years, Greenville, Florida. Referred by Dr. J. F. Mixson. Extensive ulceration of both legs, with osteomyelitis and periostitis. This patient has been under treatment since October 18, 1913. Two operations have been done; the ulcers and diseased bone areas have been cleared out and skin grafting has been attempted. Salvarsan has been given three times, since which improvement has been satisfactory. Now under medicinal treatment and electrical hyperemia locally.

CASE 9. M. L., white female, age nine years, Daytona, Florida. Admitted to St. Luke's Hospital October 26, 1913 with tuberculosis of the spine of seven years standing. Marked deformity treated by progressive plaster casts with jury mast. Developed tuberculosis of left lung in April 1914. Condition subsided and child returned home June 1914. Has since been under observation. Spinal disease apparently arrested, bone sound but with marked deformity.

CASE 10. S. F., white male, age sixteen years, Wellborn, Florida. Referred by Dr. P. T. McClellan. Admitted to St. Luke's Hospital in October 1913 with spastic paralysis and deformities entire left side. Operations were performed October 28 and November 19, 1913 on the tendons of leg and arm. Both limbs straightened. The patient having no control of left leg an operation was performed January 28, 1914. The articular surfaces of left knee-joint were removed, and the tibia, femur and patella were nailed together; the object being to provide solid bone from hip to ankle. The result was satisfactory but the boy was returned to his home June 16, 1914 because there was no indication for further operative correction and we had no equipment for physical or manual training.

CASE 11. R. C., white male, age seventeen years, Jacksonville, Florida. Tuberculosis of the spine with extreme kyphosis and discharging abscesses. Disease dated from three years of age. Upon admission to St. Luke's there was paralysis of the lower extremities and a heavy discharge of pus from one of the old sinuses. Under extension-traction there was a continued improvement in the use of the limbs. The sinus was injected with bismuth paste. Patient discharged in March 1914 with abscesses healed and with some improvement in the use of limbs.

CASE 12. P. A., white male, age sixteen years, Williston, Florida. Referred by Dr. J. M. Good. Talipes equinus of eight years' standing. Operation at St. Luke's Hospital April 1914. The tendo Achilles was lengthened two inches and the foot straightened. Patient discharged in May 1914 foot straight. Function restored.

CASE 13. R. W., white male, age eight years, St. Andrews, Florida. Admitted to St. Luke's Hospital March 5, 1914 with lateral rotary curvature of the spine; general condition poor; marked anemia due to hookworm. Treated in progressive plaster casts with decided improvement. Hookworm eradicated while undergoing treatment. General health and strength greatly improved.

CASE 14. P. G., white male, age fourteen years, Jacksonville, Florida. Referred by Dr. N. A. Upchurch. Admitted to St. Luke's Hospital August 3, 1914 with osteomyelitis of the femur. Operation August 8, 1914. Diseased bone was removed from about eight inches of the lower portion of the shaft of the femur. Secondary operation was done November 18, 1914, in which additional necrotic bone was removed. Patient is in

excellent general health with local conditions improved. Still under treatment.

CASE 15. L. W., white male, age thirteen years, Sanford, Florida. Referred by Dr. T. A. Neal. Admitted to St. Luke's Hospital October 15, 1914 with severe osteomyelitis of the shaft, neck and head of humerus. Operation November 7, 1914. Necrotic bone was cleared away. The disease involved the upper seven inches of the bone. Still under treatment. Improvement satisfactory.

CASE 16. C. J., white male, age seventeen years, Punta Gorda, Florida. Referred by Dr. D. N. McQueen. Admitted to St. Luke's Hospital September 20, 1914 with tuberculosis of the left hip joint. Treated in long plaster spica casts. Returned home November 23, 1914. Treatment to be continued by Dr. McQueen.

CASE 17. A. N., white male, age five years, Jacksonville, Florida. Referred by Dr. J. K. Simpson. Admitted to St. Luke's Hospital March 22, 1914 with tuberculosis of the spine of six months standing; mid dorsal kyphosis unable to walk without support. Treated on Bradford frame with gradually increasing extension of the spine. Still under treatment. General condition excellent; spine nearly straight; process apparently arrested.

CASE 18. R. H., white male, age fourteen years, Punta Gorda, Florida. Referred by Dr. D. N. McQueen. Admitted to St. Luke's Hospital September 20, 1914 with hare lip and cleft palate. Operation October 8, 1914. Hare lip was repaired. Result satisfactory. Returned home October 31, 1914 with instructions to have decayed teeth repaired and return for operation on palate.

CASE 19. A. C., white female, age 4, Jacksonville, Florida. Admitted to St. Luke's Hospital September 28, 1914 with abscess of the inner aspect of the right thigh. Operation by Dr. Buffalow. Abscess drained. Discharged cured October 1914.

CASE 20. E. A., white female, age twelve years, Plant City, Florida. Admitted to St. Luke's Hospital October 24, 1914 with spastic paralysis and deformity of the right arm and right leg. Operation October 31, 1914 at St. Luke's. The knee was straightened and the tendo Achilles was lengthened. The astragalus was removed and the foot placed in good position. The object of the work being to eliminate the ankle joint and thus do away with the necessity for braces to hold up the foot. The child is still under treatment but unless we have necessary equipment for training will have to be returned home with her potential improvement incomplete.

CASE 21. U. K., white male, age twelve years, Key West, Florida. Referred by Dr. W. R. Warren. Admitted to St. Luke's Hospital October 21, 1914 with right talipes equinovarus, neglected type; walking on outer aspect of foot. Operation October 24, 1914 at St. Luke's. Tenotomy of tendo Achilles; cuneiform resection of the metatarsal bones. Foot put up in plaster in the valgus position. Still under treatment. Practically cured. Foot in excellent position. Patient will be sent home shortly with position and function entirely restored.

CASE 22. L. H., colored female, age six months, Jacksonville, Florida. Admitted to Brewster Hospital October 30, 1914 with marked double club foot. Operation at Brewster December 9, 1914. Tenotomies were done on both feet; position corrected. Now under treatment in adhesive and plaster dressings.

CASE 23. D. S., white female, age fifteen years, Jacksonville, Florida. Admitted to St. Luke's Hospital December 1914 with severe osteomyelitis and periostitis of the left tibia. Operation and treatment will be given in 1915 report.

CASES 24, 25, 26—The D. R. children, aged nine, twelve and fourteen years respectfully, of Zephyrhills, Florida. Referred by Dr. W. C. Rice. These cases presented a type of amaurotic family idiocy, a high grade imbecility with muscular dystrophy, of leutic origin, coming on at about six years of age. Salvarsan was given and the children were returned home for further treatment by Dr. Rice.

Of the cases examined or admitted to hospital for observation and subsequently returned to their homes without treatment because of lack of adequate facilities, there were included cases of muscular dystrophy, congenital syphilis, lateral curvature of the spine, spinal tuberculosis, spastic paralysis in all its forms, and poliomyelitis. Of twenty-three cases of poliomyelitis, spastic paralysis and spinal curvature but two were admitted during 1914. While operative correction is often indicated in such cases to remedy actual deformity, yet unless active training treatment is instituted following operation the operative work is often useless because without proper care the patient relapses to the original deformity.

REPORT OF BOARD OF EMBALMERS' EXAMINERS

DR. JOSEPH Y. PORTER, *Chairman*,

DR. HENRY HANSON,

DR. C. H. DOBBS.

REPORT OF BOARD OF EMBALMERS' EXAMINERS

Jacksonville, Fla., May 18, 1914.

To the President and Members of the State Board of Health:

A report of an examination of embalmers, held at the executive offices of the Board May 15 and 16, 1914, is submitted herewith.

26 applicants were duly admitted to the examination upon having filed application for examination and found eligible.

Owing to the large number of applicants, two days were required to complete the examination, which consisted of written and oral tests.

The following questions made up the written examination:

Give brief, concise biography which will include birthplace, age, residence and school attended. State whether you have served as an apprentice and how long. Also what other experience you have had in this line of work.

1. What do you consider a positive sign of death, and what methods would you employ to determine that life is extinct?
2. What is embalming?
3. What is meant by arterial embalming?
4. What is meant by cavity embalming?
5. Which is the more important—arterial or cavity embalming?
6. In what class of cases is cavity embalming necessary?
7. Do you use the same embalming fluid for all cases?

ANATOMY.

8. Name the three cavities of the body that are important from the embalmer's point of view.
9. Name the important organs in each of the three cavities referred to in the previous question.
10. Describe an artery and tell how it differs from a vein.
11. Name the four arteries through which embalmers usually make their injections.
12. Describe the pulmonary circulation.



Figure 1. A. N. Tuberculosis of the spine with characteristic deformity.



Figure 2. A. N. On Bradford frame undergoing treatment for cure of disease and correction of deformity.

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Figure 1. A. N. Tuberculosis of the spine with characteristic deformity.



Figure 2. A. N. On Bradford frame undergoing treatment for cure of disease and correction of deformity.



Figure 3. E. A. Talipes equinus and contracture deformity of knee. Result of spastic paralysis.



Figure 4. E. A. Result after operation on tendons at knee joint and on bones and tendon of foot and leg.



Figure 3. E. A. Talipes equinus and contracture deformity of knee. Result of spastic paralysis.



Figure 4. E. A. Result after operation on tendons at knee joint and on bones and tendon of foot and leg.



Figure 5. R. W. Lateral rotary curvature of the spine.



Figure 6. R. W. In corrective plaster cast showing method of forcing prominent ribs inward by pads and straps. The cast is cut out on the



Figure 5. R. W. Lateral rotary curvature of the spine.



Figure 6. R. W. In corrective plaster cast showing method of forcing prominent ribs inward by pads and straps. The cast is cut out on the



Figure 7. M. P. Lateral rotary curvature of the spine. Extreme neglected type.



Figure 8. M. P. In first corrective plaster jacket.



Figure 7. M. P. Lateral rotary curvature of the spine. Extreme neglected type.



Figure 8. M. P. In first corrective plaster jacket.



Figures 9, 10 and 11. Radiographs showing types of osteomyelitis (destruction of bone due to infection) of tibia (D. S. 9), femur (P. G. 10) and humerus (L. W. 11).



Figure 12. S. F. Deformities of upper and lower extremities following spastic paralysis.



Figure 13. S. F. After corrective operation on tendons of extremities.



Figure 14. S. F. Muscular action being entirely lost in the left lower limb, the knee joint was removed and the femur, tibia and patella were nailed together as shown in the radiograph, thus providing a solid bone from hip to ankle joint.



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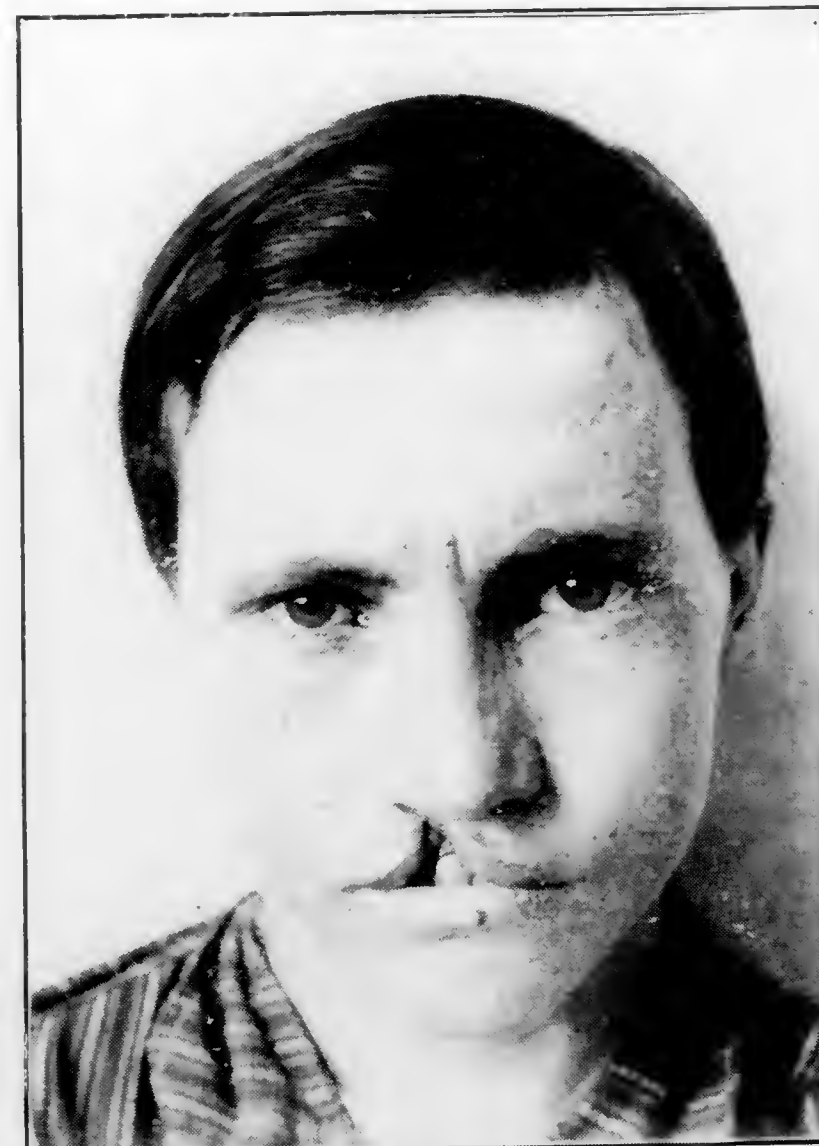


Figure 15. R. H. Unilateral hare lip.

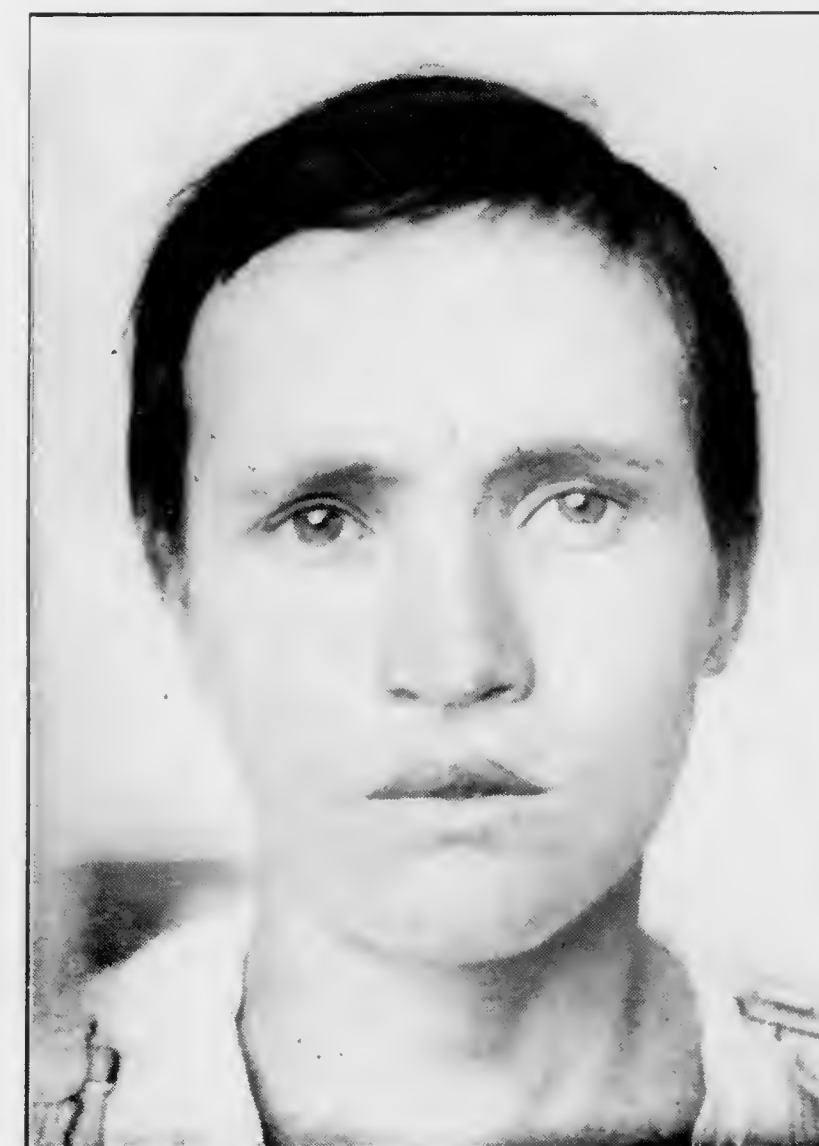


Figure 16. R. H. Twelve days after repair.



Figure 17. U. K. Extreme type of neglected club foot (talipes varus).



Figure 18. U. K. After corrective operation on bones and tendons.

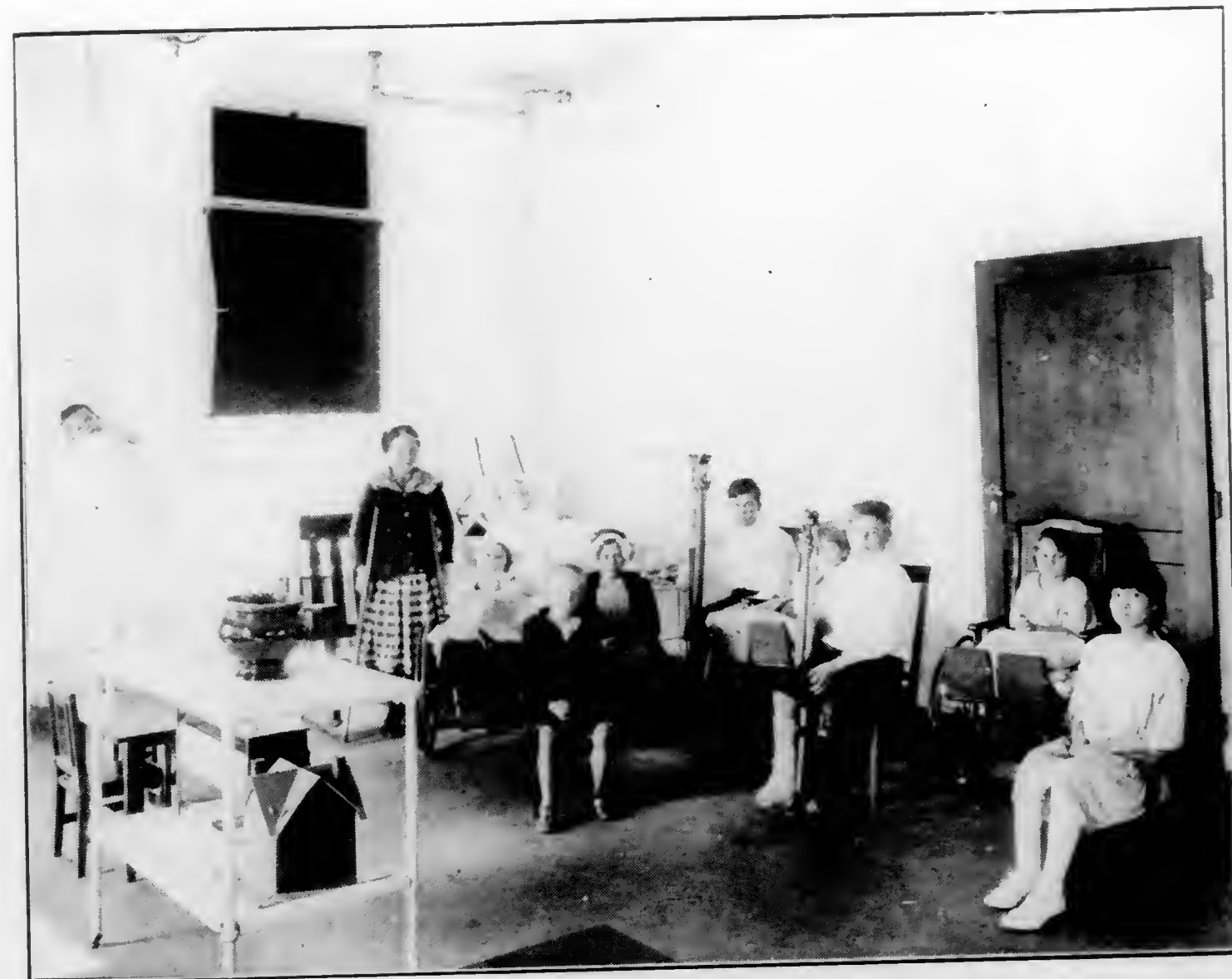


Figure 19. View of children's ward St. Luke's Hospital, Jacksonville, showing some of the state patients.



Figure 20. Children's ward at St. Luke's Hospital, Jacksonville. State cases.



Figure 19. View of children's ward St. Luke's Hospital, Jacksonville, showing some of the state patients.



Figure 20. Children's ward at St. Luke's Hospital, Jacksonville. State cases.

BACTERIOLOGY.

13. What are bacteria? In what part of the body are bacteria always present in large numbers?
14. What are the causes of putrefaction and decay?
15. What conditions are necessary for bacteria to grow and multiply?
16. What diseases can be successfully vaccinated against?
17. Under what conditions would it be safe for you to handle a body dead of smallpox?

RULES.

18. What bodies are forbidden disinterment?
19. What bodies require embalming before shipment?
20. What preparation is necessary before shipping body of person who died of diphtheria or scarlet fever?

The second day was devoted to oral questioning, in which Prof. Chas. O. Dhonau, President of the Cincinnati College of Embalming and Mr. H. S. Moulton, of Jacksonville, very kindly lent their aid.

The written examination was graded as two-thirds and the oral as one-third in arriving at the percentages given. Those having a percentage of 75 per cent or over were granted licenses.

Out of 26 taking the examination, 21 were successful and 5 failed.

Those successful, and granted licenses to practice embalming in the State, are as follows:

C. E. Henderson, Tampa, Fla.....	License No. 141
James Washington (Colored), Jacksonville, Fla.....	License No. 142
Willis R. Tomlinson, Jacksonville, Fla.....	License No. 143
E. L. Morgan, Arcadia, Fla.....	License No. 144
G. B. Overton, Plant City, Fla.....	License No. 145
Leonard F. Sanchez, St. Augustine.....	License No. 146
Cary Hand, Orlando, Fla.....	License No. 147
J. L. McClelland, Punta Gorda, Fla.....	License No. 148
John R. Johnson, Jacksonville, Fla.....	License No. 149
Mrs. L. E. Bruce, St. Petersburg, Fla.....	License No. 150
Kelsey L. Pharr (Colored), Miami, Fla.....	License No. 151
Wm. S. Smith, Clearwater, Fla.....	License No. 152
S. R. Pyles, Jacksonville, Fla.....	License No. 153
D. N. Disbennett, New Smyrna, Fla.....	License No. 154
Levin King Vinson, Tarpon Springs, Fla.....	License No. 155
Andrew Froscher, Jr., Titusville, Fla.....	License No. 156
R. E. Goodman, DeLand, Fla.....	License No. 157
D. C. Thompson, St. Cloud, Fla.....	License No. 158

Wm. C. Cooper, Jr., Jacksonville, Fla.....License No. 159
Edward W. Williams, (Col.), Jacksonville, Fla...License No. 160
Lionel Brazelton, Tampa, Fla.....License No. 161

Respectfully submitted,

BOARD OF EMBALMERS' EXAMINERS,

JOSEPH Y. PORTER, *Chairman.*

BACTERIOLOGICAL LABORATORIES

REPORTS OF

DR. HENRY HANSON, (Central Laboratory)

Senior Bacteriologist.

DR. H. R. MILLS, Bacteriologist, Tampa Laboratory.

DR. F. A. BRINK, Bacteriologist, Pensacola Laboratory.

REPORT OF DR. HENRY HANSON,

SENIOR BACTERIOLOGIST

Jacksonville, Fla., Jan. 1, 1915.

DR. JOS. Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to submit report of laboratory operations for the year 1914, the eleventh annual report of the Central Laboratory located at Jacksonville.

At the close of 1914, the State Board of Health has six laboratories so located that all points in the State are readily accessible. The six laboratories offer all the laboratory facilities which the State needs. The experience of the last five years has shown where changes and improvements are desirable whereby the laboratories can be made to render the greatest service to the people of the State. Certain changes have already been made, others are recommended.

That the value of these laboratories to the State is appreciated is shown by the steady increase of the work. There are many however, who appear not to know that they exist, or that they offer free and accurate information on all diseases of a communicable nature. These laboratory facilities have offered information on lines which do not strictly pertain to the conservation of public health, such as unrinalysis and diagnosis of pathological tissues. Fortunately, routine unrinalysis has been ruled out.

The function of a Public Health Laboratory is to furnish prompt and accurate reports on specimens sent in. This requires competent and active laboratory management in a well equipped laboratory. However accurate a laboratory and however willing a service rendered, it still requires intelligent cooperation by the physicians who patronize the laboratories. The physicians in the State must give the closest attention to the train schedules and mail service and specimens mailed at the postoffice should carry sufficient postage and be mailed before the mail "is made up" and has gone to the station. This feature of the work has often been commented upon in Health

Notes during the year and has been frequently referred to in my monthly reports.

A difficulty which it seems that we cannot overcome, is the matter of specimens which have been sent "postage due." It is a daily occurrence at the Central Laboratory to receive several specimens which have only enough postage to get them out of the postoffice, where mailed, and these specimens when received in the postoffice at Jacksonville, have been held for additional postage before they could be delivered, which has often meant a delay of many hours.

The seriousness of this in diphtheria diagnoses is appreciated by all who stop to think about it. The laboratory has been unjustly censured many times for delay in reports in instances of this kind. Criticism and skepticism is generally misdirected and is made by individuals who are not well informed. Bacteriologists as a whole, are criticised where the blame lies as much with the critic as with the person criticised.

On account of the great demand for bacteriological investigation the country has been flooded with improperly trained laboratory workers who, like other medical quacks, have found that they can play upon the credulity of the uninformed and derive financial success from their operations. Men and women, boys and girls, who have only an incomplete High School education and a few weeks' training in some laboratory where they have gotten a smattering of laboratory knowledge are seeking positions and have been recommended for positions which require competent trained bacteriologists. It seems that it might be well to have a system of laboratory surveys or a commission for investigating the efficiency of laboratories and laboratory workers in all the States, such as has been adopted for the various medical schools of the country. This might serve to eliminate the unfit and establish the confidence which well equipped laboratories with trained laboratory workers deserve.

Health Officers generally, have shown a tendency to feel that reports from laboratories are not to be relied upon and feel hampered in the conduct of epidemiological work. This is often due to misinterpretation of results obtained in labora-

tories, a great deal of which has arisen from the controversy over "disease carriers."

It is necessary that all men who work in laboratories should not only know laboratory technic and be able to recognize the various organisms dealt with but they should also have sufficient training to enable them to properly interpret and make clear to the public the meaning of the presence of a diphtheria bacillus in the throat or a typhoid bacillus in excreta.

If such standards were adopted and men of ability were employed it would soon result in more uniform opinions among Executive Officers and the laboratory workers in regard to the management of public health work. The present standard of salaries throughout the country is such that men with the necessary education and training find it difficult to take up this line of work if they are not able to draw upon private funds. The diagnoses made in the Public Health Laboratories are such that it is almost a daily occurrence to make decisions which mean life or death to the patient for whom the examination is made.

When such is the case it seems that the public should be educated to demand efficiency and a willingness to pay a proper remuneration to those who are trusted with this work. In this State the cost of maintenance of the laboratories involves about two cents per individual per year, which covers salaries and total maintenance of all laboratories within the State of Florida. It is quite safe to assume that there is scarcely an individual in the State who does not spend one hundred times that amount for useless if not detrimental amusement each year.

Details:
Pellagra.

In the month of August, I was detailed to attend the Pellagra Conference and Meeting of Health Officers for the State of Kentucky. The discussion at this meeting was of such a nature as to suggest that Pellagra was a communicable disease, but the method of transmission was unknown. The etiology of the disease was not established. The Thompson-McFadden Commission was represented and reported many very interesting facts in regard to the importance of any single article of diet as a cause of the disease. They have quite definitely prov-

en that neither corn nor any other single article of diet is in itself a cause of Pellagra.

Laboratory investigations up to date are of purely negative value. It has been found however, that nearly all Pellagrins have hookworm infection, and that the hookworm treatment hastens recovery. Hookworm infection however, seems to be only a contributory factor.

The work of the United States Public Health Service points to a one-sided diet as the cause of the disease and takes the disease entirely out of the realm of operation of the Public Health Laboratory.

In the first week of September, I was directed to proceed to Miami to prepare specifications for fixtures and supplies for the State Board of Health Laboratory at that point. The specifications were placed in the hands of Dr. J. M. Jackson, Agent of the State Board of Health, and Dr. Edgar Peters, City Health Officer for Miami, who supervised the installation of the same.

Miami Laboratory.

From the 11th to the 21st of September, I was detailed to New Orleans to study the methods of the United States Public Health Service in plague eradication. Most of the time was spent in the laboratory for the examination of rats. In this period I saw thirty-four plague rats and the general technic used in the examination of more than ten thousand.

Plague.

It is absolutely necessary that a Bacteriologist should have opportunities of this kind before he attempts any investigation of his own. If he is attentive to the technic he will find that there are so many difficulties attending the laboratory work for identifying plague infection that it is very unwise to attempt it without the assistance of an expert in rat plague. The rat is a pathological animal with numerous lesions which the non-expert may call plague and on the other hand he may fail to recognize some of the mild atypical cases.

A detail to Bayard and Greenland, Florida, in November, to investigate alleged cases of leprosy and pellagra failed to establish either of the diseases at those points. The suspected leprosy cases proved to be benign leukoderma.

Leprosy.

Under the heading of animal parasites we show an increase of about eight hundred over the number of such examinations

Laboratory
Examinations.

for 1913. This number is smaller than it should be and it seems to me that the field men should be directed to urge this line of work for the coming year. The examinations have shown 33 per cent positive for hookworm in two thousand nine hundred and sixty-two specimens in 1914, and 49.6 per cent positive in two thousand two hundred and thirty-one examinations in 1913. Our results indicate that the laboratory is being used more for the diagnosis of mild obscure cases and that the physicians are diagnosing and treating the pronounced cases on clinical symptoms.

Diphtheria.

Fewer examinations were made for diphtheria than during 1913 which is due to the fact that the Central Laboratory has not done the work for detection of carrier cases for the Jacksonville City Board of Health in the special school investigation conducted by Dr. C. E. Terry. In this investigation cultures for release of cases quarantined were sent to the Central Laboratory.

For laboratory statistical purposes we have listed a number of examinations of stained smears from swabs from suspected new cases. In this series we have four hundred and sixty-nine examinations in which we find 15.75 per cent positive for diphtheria bacilli. No direct swab examination was made for release or carrier cases. The positive results from swab examinations were later confirmed by cultures on Loeffler's blood serum media.

Of the three thousand one hundred and seventy throat cultures examined during the year, 15.39 per cent were positive, showing a close similarity to the ratio obtained on swab examinations. The percentage of positives was lower for 1914 than for any of the previous five years.

1910—	148 swabs examined with 19.92 per cent positive.
	399 cultures examined with 28.32 per cent positive.
1911—	389 swabs examined with 21.3 per cent positive.
	399 cultures examined with 28.27 per cent positive.
1912—	848 swabs examined with 19.92 per cent positive.
	900 cultures examined with 34.44 per cent positive.
1913—	967 swabs examined with 18.71 per cent positive.
	4,265 cultures examined with 16.43 per cent positive.
1914—	486 swabs examined with 15.75 per cent positive.
	3,170 cultures examined with 15.39 per cent positive.

The averages for positive swabs and cultures examined

during the last five years give 19.12 per cent positive for two thousand eight hundred and thirty-eight swab examinations and 24.57 per cent for nine thousand one hundred and twenty-three cultures.

Of the diphtheroid organisms we include the following in our positives, according to Wesbrook's classification: types a, c, d, a', c' and d'. The solid types a'', c'' and d'', are considered questionable for diagnosis. If one included such types as c'' the percentage of diphtheria carriers would become very high indeed, because there are so many organisms of this type found in the throats of healthy individuals that one would have great difficulty in distinguishing between the c'' type and other uniform staining bacilli. The same applies to type d''.

During the meeting of the American Public Health Association held in Jacksonville in December, Dr. Kinyoun presented a paper on a modification of Ponder's stain for diphtheria diagnosis. The stain is made up as follows:

Toluidin blue.....	.5 grams
Azur I.....	.05 grams
Grubler's Methylene blue.....	.05 grams
Glacial Acetic acid.....	5 cc
Alcohol 95 per cent.....	25 cc
Water up to.....	600 cc

Mix dye and alcohol, then add water and then acid and allow to stand twenty-four hours and filter.

We have used this stain on a limited number of cases, but at the close of the year have not enough data to draw any conclusions. Our limited results however, are very promising. It is hoped that this stain will help to eliminate a large number of the doubtful and nonvirulent forms.

The number of positive cultures show a decided increase each year during the first three months of the school year. Whether this increase is due to the presence of actual cases of a mild nature or to diphtheria bacilli carriers is a question which is being argued. In order to properly answer this question a careful survey should be made of a school where cases or carriers have been found and swabs taken from all throats for cultural examination. The positive cases should be taken out of school and the remaining children should be swabbed again to determine if any new cases or carriers have

developed. If the cases or carriers which appear at this time are removed and a third swabbing is made one ought to get data which is of some value showing what effect these have on the incidence of the reappearance of the disease or "carrier cases." The ideal method of pursuing this investigation further would be to return these children who had been cases or carriers to a school or room isolated from the rest of the school and then keep these under the care of a competent observer.

If an infected child is present among a group of children an opportunity for conveying infection from one child to another is very much greater than among a group of adults on account of the habit children have of sticking their pencils, etc., into their mouths and passing them on to another child who invariably does the same thing. It has also been observed that children will borrow chewing gum from one another. It is on account of such characteristics of children that one must consider the presence of a carrier of typical diphtheria bacilli (type a, c, d, or a', c', d'.) a possible menace to other children.

It is a mistake to lay all the emphasis on diphtheria carriers. Those who inspect school children's throats find that a large percentage have enlarged and inflamed tonsils which when cultured show virulent streptococci. From the investigations made by Stokes, Arms, Irons and others, we know that dirty milk is often the cause of serious throat troubles, and that milk is a favorable medium for the growth of both diphtheria bacilli and streptococci. For that reason I believe that when a complaint comes from a community about the presence of diphtheria or other throat troubles the State Board of Health should have authority to inspect and to supervise and to correct the existing defects in dairy conditions. *In fact it would be for the interest of the public health, if all dairies operating within the State were required to have certificate from the State Board of Health or from some authority approved by the State Board of Health.*

In order to overcome the delay which has been complained of in the past in diphtheria diagnoses we have communicated with a number of City Health Officers in the larger towns

Diphtheria
Specimens
Delayed

throughout the State in regard to supplying them with Loeffler's blood serum tubes which they will furnish to physicians of their city to inoculate from their suspected throat cases. During the warm weather these cultures will develop sufficiently in transit to allow diagnosis as soon as the tube is received in the laboratory. In throat cases where there is no definite clinical manifestations of diphtheria this will furnish sufficiently prompt report for the physician to be guided as to whether or not he will administer antitoxin. In the definite clinical cases of diphtheria I do not believe that it is advisable to wait for this diagnosis but antitoxin should be given at once in order to be of the greatest value. When one has access to specific methods of diagnosis and to a definite specific therapeutic agent such as antitoxin it does not seem that it is wise to give antitoxin in all cases of sore throat simply on suspicion that it might be diphtheria. Certainly there is no call for giving antitoxin to a case of Vincents angina, or to one with a syphilitic sore throat.

Last year a great deal was said about the value of lactic acid bacillus cultures as an over rider for diphtheria bacilli. The clinical results have been of doubtful value. In order to check the action of the lactic acid bacillus on the diphtheria bacillus we isolated a number of pure cultures of diphtheria bacilli and planted these in milk tubes with the lactic acid bacillus. After twenty-four and forty-eight hours incubation subcultures from these tubes were made on blood serum media and viable diphtheria bacilli were obtained which indicates that the lactic acid bacillus is valueless as a medium for destroying diphtheria bacilli in the throat.

During 1913 the Central Laboratory had four hundred and thirty-seven such specimens for examination with 41.8 per cent positive. In 1914 we have had six hundred and seventy-one specimens with 38. per cent positive.

Malaria has shown an actual decrease in the number of specimens submitted and also in the percentage of positives. Six per cent of the specimens were positive in 1914, and eleven per cent positive in 1913.

Lactic Acid
Bacilli and
Diphtheria
Carriers.

Gonorrhœa.

Malaria.

Typhoid.

Typhoid shows a rather decided increase over last year both in the number of specimens submitted and in the percentage of positives. 1914 shows 21.5 per cent positive in two thousand one hundred and ninety-nine specimens while 1913 shows only 18.19 per cent positive in sixteen hundred and fifty-five examinations. There were two hundred and seventy-two more cases diagnosed positive in the Central Laboratory in 1914 than in 1913.

Tuberculosis.

The specimens of sputum submitted is practically the same with a very slight decrease in the number of positives. The percentages are 24.58 in one thousand six hundred and seventy-two specimens for 1914 and 26.5 in one thousand six hundred and seventy-one specimens for 1913.

Rabies.

There is a very gratifying decrease in the number of dogs' heads sent in for examination for rabies and in percentage of positives. In 1913 we had one hundred and nineteen brains for examination with 58.8 percentage positive while in 1914 we had eighty-two brains with 43.9 percentage positive for hydrophobia. No human cases have been reported to the Central Laboratory.

Water.

One of the greatest improvements which has been made in the laboratory during the last year has been in connection with examinations for water. This is largely due to the fact that we have secured Mr. W. D. Hayes, formerly Assistant to Dr. Marks, Chief of Bureau Sanitary Engineering, of the State Board of Health of Kentucky, who is trained in sanitary water analysis. We are now making a complete sanitary chemical and bacteriological analysis of all samples submitted. The chemical analysis of water in the laboratory at the present time covers the following points: color, odor, turbidity, nitrogen as free ammonia, albuminoid ammonia, nitrates and nitrites, chlorine as chloride, oxygen consumed, oxygen dissolved, total solids, temporary hardness and permanent hardness.

In order to have the water collected in the proper manner a special blank has been drawn up, a copy is attached hereto. This gives detailed instructions for collecting samples and also calls for information of the nature of the water and surrounding conditions. In order to secure water according

to instructions a special container has been devised for shipping iced samples. Bottles are protected from contamination by a second container made of copper with a water tight joint which protects the sample bottle from contamination with dirty ice or ice water.

It would seem that in as much as this work is for the welfare of the State at large that the Express Company should be requested to give a flat rate of twenty-five cents for each of these shipping cases to and from any point in the State. They are so gotten up that they can be handled without difficulty and are practically unbreakable.

The number of pathological tissues has also increased during the past year. The increase is very marked in specimens showing carcinoma; sixteen for 1913, and twenty-nine for 1914. The Secretary for Control and Prevention of Cancer requests cooperation from the State Board of Health in securing data on prevalence.

Pathological Specimens.

The animal house which has been completed and equipped during the past year has very greatly added to our laboratory facilities. Equipment of many kinds has been added during the past year which with a few additions will place us on an equality with any other public health laboratory.

Equipment.

We have made several changes in the personnel of the laboratory owing to the establishment of branch laboratories at Miami and Tallahassee. Dr. Iva C. Youmans, who for several years has been First Assistant in the Central Laboratory was placed in charge of the Branch Laboratory at Miami. Dr. W. A. Claxton, formerly Second Assistant in the Central Laboratory has been made Bacteriologist in charge of the Branch Laboratory at Tallahassee.

Personnel.

To fill these vacancies and that created in the Tampa Laboratory by the resignation of Dr. G. H. Simon, the following men have been secured: Dr. W. L. Holt, Dr. J. W. Denton and Mr. W. D. Hayes. Dr. Holt has been detailed to Tampa to assist Dr. H. R. Mills, who succeeded Dr. G. H. Simon as Bacteriologist in charge of the Tampa laboratory. Dr. Denton and Mr. Hayes have been retained in the Central Laboratory and both have rendered satisfactory service, and have shown themselves to be capable men.

STATEMENT OF SPECIMENS EXAMINED—Continued
In the Central Laboratory, Jacksonville, Florida, 1914

	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Cat Neg....	2	2	1	4	3	1	1	1	15	82
Cat Doubt....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	2
Cow Neg....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Rat Pos....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Tuberculosis:														1,672
Pos.	44	45	35	36	35	39	25	27	36	35	35	19	411	
Neg.	124	131	118	119	123	107	80	64	75	100	80	86	1,207	
Unsat.	5	7	.....	3	4	6	4	9	3	6	5	2	54
Typhoid:														2,199
Pos.	40	21	31	36	67	86	84	65	44	32	24	43	573	
Neg.	70	73	69	121	133	213	199	196	143	107	83	73	1,480	
Incomp.	12	5	5	14	23	21	19	21	10	5	4	7	146	
Para-Typhoid:														13
Neg. ....	.....	.....	.....	.....	1	4	1	1	2	.....	.....	4	13
Urinalysis	15	19	17	16	17	16	10	12	11	13	13	9	168	
Water (for Sewage Con- tamination):														
Pos.	1	2	3	2	17	7	13	9	11	9	1	10	85	249
Neg.	3	11	17	12	16	25	10	15	9	12	8	13	151	
Doubt ....	.....	1	.....	4	.....	.....	1	.....	.....	.....	.....	7	13
‡Miscellane- ous:														
Animal In- oculation	1	4	3	6	14	17
Autogenous Vaccine ...	1	3	.....	2	1	2	.....	.....	.....	.....	4	4	17
Blood Count:														
Differential	4	1	6	5	5	7	4	6	4	1	.....	3	46
Plain	3	4	1	1	3	1	13	5
Leprosy:														
Neg.	2	.....	.....	1	.....	.....	.....	.....	2	.....	.....	.....	5
Ophthalmia:														17
Pos. ....	.....	.....	2	1	.....	.....	.....	1	.....	.....	1	.....	5
Neg. ....	.....	.....	.....	2	2	.....	.....	2	.....	.....	.....	.....	6
Doubt ....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Spinal Fluid..	4	6	1	2	1	1	2	17	6
Spirochaete														
Pallida:														
Neg. ....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	3	6
Vincent's														10
Angina ....	.....	.....	.....	.....	1	.....	2	.....	3	.....	4	.....	10
Unclassified ..	7	3	21	13	17	10	22	17	9	26	6	15	166	
	1,234	971	1,142	1,241	1,240	1,326	1,274	1,260	1,121	1,494	1,283	1,007	14,593	14,593

*All Epitheliomas and Carcinomas are classified under the general heading Epithelioma, which includes 3 Chorio-Epithelioma, 1 Rodent Ulcer, 7 Adeno-Carcinoma, and 1 Squamous celled Carcinoma.

†Under general heading Sarcoma there are 2 Alveolar Sarcoma, 1 Round celled Sarcoma, and 1 Fibro-Sarcoma.

‡Included under miscellaneous unclassified are 4 Meningitis, 2 Tetanus, 54 Milk, 55 Cultures, 2 Knee Fluid, 1 Arthritis Fluid, 2 Pleural Fluid, 3 Gastric Contents, 3 Leukemia, 3 Vomitus, 3 Mucous Colitis, 1 Synovial Fluid, 1 Aspergillus, 1 Conjunctivitis, 9 Occult Blood, 1 Pterocercoid Debothriocephalus, 1 Hymenolepis Murina, 1 Lupus, 2 Myiasis, 1 Filaria.

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914.

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pates	Rabies	Leprosy	Total
Alachua	2	1	.....	3	3	.....	1	.....	10
Alton	1	.....	.....	.....	2	.....	.....	.....	3
Altoona .....	.....	.....	.....	.....	.....	1	.....	.....	1
Anthony .....	.....	.....	.....	.....	.....	7	.....	.....	7
Apalachicola	4	.....	.....	3	2	.....	.....	.....	9
Apopka .....	.....	.....	1	1	6	1	.....	.....	9
Arcadia	1	1	2	20	2	.....	1	.....	27
Archer .....	.....	.....	.....	1	.....	7	.....	.....	8
Avon Park.....	.....	.....	.....	.....	1	1	.....	.....	2
Baldwin .....	.....	.....	.....	3	.....	.....	.....	.....	3
Bagdad .....	.....	.....	.....	2	5	.....	.....	.....	7
Bartow	2	3	2	7	11	8	.....	.....	33
Bayard .....	.....	.....	.....	.....	.....	3	.....	.....	3
Bell .....	.....	.....	.....	.....	.....	1	.....	.....	1
Bellview .....	.....	.....	.....	.....	.....	5	.....	.....	5
Blichton .....	.....	.....	.....	.....	1	.....	.....	.....	1
Bluff Springs.....	3	.....	.....	.....	.....	.....	.....	.....	1
Bonifay .....	.....	.....	.....	.....	.....	1	.....	.....	1
Bostwick .....	.....	.....	.....	.....	.....	.....	1	.....	1
Bowling Green.....	.....	.....	.....	.....	.....	7	.....	.....	7
Bradentown	2	.....	3	2	6	6	.....	.....	19
Brandon .....	.....	.....	.....	.....	1	1	.....	.....	2
Branford	1	.....	.....	.....	.....	3	.....	.....	4
Brooksville	1	1	1	3	2	3	.....	.....	11
Bronson .....	.....	.....	.....	.....	1	7	.....	.....	8
Bushnell .....	.....	.....	.....	5	.....	1	.....	.....	6
Callahan .....	.....	.....	.....	.....	1	.....	.....	.....	1
Campbellton .....	.....	.....	.....	1	.....	1	.....	.....	2
Campville	1	.....	.....	1	.....	1	.....	.....	3
Carrabelle .....	.....	.....	.....	.....	.....	1	.....	.....	1
Cedar Key.....	.....	.....	.....	.....	.....	.....	1	.....	1
Center Hill.....	.....	.....	1	.....	2	5	.....	.....	8
Centralia .....	.....	1	.....	.....	.....	.....	.....	.....	1
Century	19	.....	.....	1	.....	2	.....	.....	22
Chattahoochee	1	.....	.....	.....	1	.....	.....	.....	2
Chipley	1	.....	.....	.....	2	.....	.....	.....	3
Christina .....	.....	.....	.....	2	.....	.....	.....	.....	2
Citra .....	.....	.....	1	3	.....	17	.....	.....	21
Clearwater .....	.....	3	.....	3	1	1	.....	.....	8
Clermont .....	.....	1	.....	.....	.....	.....	.....	.....	2
Cocoa .....	.....	.....	.....	3	3	7	.....	.....	13
Coleman .....	.....	.....	.....	1	.....	.....	.....	.....	1
Cottdale .....	.....	.....	.....	.....	1	.....	.....	.....	1
Crescent City.....	.....	.....	1	.....	1	10	.....	.....	12
Crestview .....	.....	.....	.....	.....	.....	6	.....	.....	6
Crystal River.....	.....	.....	.....	1	.....	.....	.....	.....	1

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914—Continued

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pates	Rabies	Leprosy	Total
Dade City.....				4					4
Daytona	20		1	29	8	3			61
DeFuniak Springs.....	28				2	11			41
DeLand			1	1	2	9			13
Delray	3	1		3	3	4			14
Dowling Park.....		2		3			1		6
Dunedin				1					1
Dunnellon			2	1		25			28
Dupont			1	1		1			3
Eau Gallie.....						1			1
Emporia					3				3
Eugene						1			1
Eustis	3					4			3
Fairfield									4
Fellsmere	2			3	3	1			2
Fernandina	1				1				8
Flomaton						1			1
Floral City.....						8			1
Freeport				2					2
Frost Proof.....					1				1
Fort Dade.....						1			1
Fort Green.....				4		2			9
Fort Meade.....		3				8			26
Fort Myers.....		1	1	11	5	3			14
Fort Ogden.....				3	3	8			39
Fort Pierce.....		3		3	23	10			85
Gainesville	29	12	13	18	8	4	1		1
Galliver						10			10
Garniers									1
Golding				1					1
Goulds						1			1
Graceville	1								5
Grandin					1	4			1
Grand Ridge.....						1			8
Green Cove Springs.....	2	5				1			5
Greensboro					2	3			1
Greenwood							1		8
Greenville				6	1	7			9
Gretna				2		4			4
Hampton								1	1
Havana							1	2	7
Hawthorn	3			1		3			6
Hernando						2			2
Hilliard						5			6
Holder				1					3
Holts				2	1				

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914—Continued

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pates	Rabies	Leprosy	Total
Homestead	1								1
Inglis						4			4
Inverness	1		1			2			4
Islamorada					1				1
Jacksonville	178	161	40	180	172	407	7		1,145
South Jacksonville.....	5	4	1	3		2			15
Jasper	33		6	6		9			56
Jennings					3				3
Kathleen						4			4
Key West.....	7	1		1	5				14
Kissimmee					4	9	1		14
Lady Lake.....				1					1
Lake Butler.....			1	6	2	12	1		22
Lake City.....		4		4	2	2			12
Lakeland	12	7	2	14	14	5			54
Lake Worth.....				3					3
Largo		3	2		2	9			16
Lawtey							1		1
Lebanon						5			5
Leesburg	4		1	6	8	4			23
Lemon City.....		1							1
Limona					1				1
Lithia							1		1
Live Oak.....	2	2	9	14	7	8	1		43
Lulu				1					1
Lutz				1					1
Lynn Haven.....						3			3
Madison	1						2		3
McIntosh				1		1	1		3
Malabar						3			3
Malone					1	2			3
Manatee	4		1	2	1	3			11
Mandarin			1	1	2	39			43
Mango				2					2
Marco						1			1
Marianna	8			1	1		1		11
Mayo				1		13			14
Mayport	2		1	1			1		5
Melbourne			1	1		5			7
Melrose			3			2			5
Miami	1	5		4	10				20
Micanopy				3	1	8			12
Micosukee				3		1			4
Milton	3	3	1	3	5	1			16
Millville	2								2
Molino	1				1				2

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914—Continued

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pa'tes	Rabies	Leprosy	Total
Monticello							1		1
Morrison				2					2
Moultrie						4			4
Mount Dora				1	1				2
Mulberry		2	1	9	5	2			19
Munson		1							1
Murdock				5					5
Muscogee			1	3					4
Myrtle						8			8
Naranja						1			1
Newberry				4	2	3	2		11
New Smyrna	2	3	1	3	2	14			25
Nichols					1				1
Nocatee				6	1				7
O'Brien				2		5	1		8
Ocala	9		5	24	3	39	1		81
Okeechobee						3			3
Oklawaha				1	1		1		3
Orient				1					1
Orlando	1	19	10	37	15	34			116
Ovieda						6			6
Oxford			1			1			2
Palatka	2	2	1	6	2	2			15
Palmetto	6	1		3		1			11
Panama City	2		1	2	2	8			15
Pensacola	24	140	31	60	65	144			464
Perry							1		1
Pierce		1							1
Pine						3			3
Pinellas Park						1			1
Pine Mount					2	1			3
Plant City	21	1	16	40	8	25	1		112
Pomona						1			1
Princeton		2	1	2		10			15
Punta Gorda	1			5	1	1			8
Quincy	4			10		3			17
River Junction				1					1
Riverview						1			1
Rocks Bluff						1			1
St. Andrews			1	1	1	6			9
St. Augustine	8	2	2	4	3	69			88
St. Petersburg	2	4	1	2	10	11			30
Safety Harbor		1		1		1			3
San Antonio		1		2		9			12
Sanford	5		1	1		5			12
Sarasota	2		1	1	6	2			12

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914—Continued

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pa'tes	Rabies	Leprosy	Total
Sebastian						17			17
Sneads			1		1	5			7
Standard						1			1
Starke		1		7	2	3	1		14
Stuart		1		1	1				3
Sumner		2		2					4
Sutherland						3			3
Tallahassee	43	2	4	27	20	13			109
Tampa	122	162	90	177	191	289	10	1	1,042
Port Tampa				3	1				4
West Tampa	6	2	1	4	5	58			76
Tarpon Springs				1	2				3
Thonotosassa						1			1
Titusville	5	3	1	7	3	3			22
Torrey						2			2
Trenton				2	2	1			5
Warrington		1							1
Wauchula	1			18	7	18			44
Webster	2			2		1			5
Welaka		1	1			5			7
Wellborn			1	1	2	6			10
West Palm Beach				5	3	5			13
Wewahitchka						2			2
White Springs						2			2
Wildwood				2		17			19
Williston	1	4		6	2	36			49
Winter Garden					2	1			3
Winter Haven				4	1	5			10
Zephyrhills						4			4
	665	588	277	937	746	1,747	46		15,007

REPORT OF DR. H. R. MILLS,
BACTERIOLOGIST, TAMPA LABORATORY.

Tampa, Fla., Jan. 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—Enclosed please find tabulated record of the work done in the Tampa laboratory during the year 1914, together with a list of the towns in the Southwest district of the State receiving positive diagnoses from the laboratory during the past year. It will be noted that there is an increase of two thousand seven hundred and five specimens examined over the total of 1913. Subtracting from this increase two thousand one hundred and thirty-eight, the number of rats examined in 1914, there is left five hundred and sixty-seven, which is the actual increase of regular specimens as compared with the year before. One striking feature of the accompanying record is the decrease in the percentage of the positive results obtained in 1914 as compared with 1913. This difference is noted particularly in the animal parasites work (with the exception of amœba) and in malaria.

The laboratory is used principally by the physicians in rejecting or confirming diagnoses made from clinical symptoms. For example, a Doctor submits a sample of blood from a patient whom he suspects is suffering from typhoid fever, and then depends upon the laboratory to tell him whether he is right or wrong, but in many cases the laboratory is able to detect positively the evidence of the disease which was not suspected by the physician in charge of the case, and it is in these cases that the laboratory has been the means of rendering indispensable service to the diagnostician. It may be interesting to cite a few instances of this matter which occurred during 1914. Quite recently a cervical swab was sent in from the physician in one of the neighboring towns with the request that it be examined for streptococcus and staphylococcus, as the patient was apparently suffering from puerperal sepsis, and that an autogenous vaccine be made therefrom. A direct

examination of the swab showed the presence of no other organisms than gonococci, and the idea of the autogenous vaccine was abandoned and other treatment instituted. On another occasion a section of liver tissue was received and an examination for malignancy requested. No evidence of carcinoma or sarcoma was found, but on the other hand the evidence of syphilis was so marked that it was reported as probably such. A Wasserman test subsequently made resulted in a positive reaction. In the pathological work particularly, we are often able to render diagnoses which are unsuspected, as the majority of specimens of this nature are sent in to be examined for malignancy. Instead of malignancy, however, we often find unsuspected tuberculosis, syphilis, or other chronic or subacute inflammation. On two different occasions requests were made for a white blood count and a differential count on patients supposed to be suffering from appendicitis or other acute inflammatory process. Both times a leucopenia was determined by the white cell count and, in making a differential examination, typical malaria parasites were found. The cases are too numerous to mention in which we find tape worm or round worm eggs, etc., in specimens to be examined for hook worm; and the eggs of hookworm or other parasites in the amœba specimens. Among these cases of unsuspected diagnoses the greatest surprise to the physician in charge and to the patient was a case from a neighboring town in which we made a diagnosis of myasis in a specimen of feces which had been sent in repeatedly for hookworm examination. For nearly a year the patient in question had on various occasions noticed "worms" in the stools. The physician in charge diagnosed the case hookworm disease and sent a sample of the stool to the laboratory for examination. The worms were not included in the sample however, as it is generally understood that in examining for animal parasites we usually search for the eggs instead of the adult worms or embryos. The result of this examination was negative, not only for hookworm but for all other animal parasites. Other specimens were sent in at short intervals and were repeatedly negative, the patient in the meantime taking, at the direction of her physician, thymol and other anthelmintic with no result. We then received a letter from

the physician explaining the case in detail whereupon we requested that some of the worms be placed in salt solution as soon as passed and brought to the laboratory alive. This was done. The specimens appeared upon gross examination to be the larvæ of some insect, and, to verify this, they were placed in a bottle containing fresh human feces, the bottle closed with a piece of gauze, and then placed in the incubator. At the end of seven days flies of the species *Musca vomitoria* were found in the bottle. The physician received the report and, under appropriate management, the patient's symptoms subsided with the disappearance of the larvæ.

During the year the working force of the laboratory suffered a severe blow by the resignation of Dr. Geo. H. Simon, Director of the Laboratory. The undersigned former Assistant Bacteriologist was appointed to fill the vacancy caused by Dr. Simon's resignation and Dr. Wm. L. Holt was appointed Assistant Bacteriologist.

Yours respectfully,

HERBERT R. MILLS,
Bacteriologist.

STATEMENT OF SPECIMENS EXAMINED IN THE TAMPA LABORATORY
DURING 1914

Mat. Ex.	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Animal Parasites:														
Hookworms														
Pos.	15	11	14	13	9	20	21	19	14	14	14	13	177	
Neg.	84	73	48	75	96	79	69	56	66	51	54	72	823	
Unfit							1						1	
Amoeba														
Pos.		3	4	1	7	4	1	1	7	1	4		33	
Neg.	20	10	5	11	25	23	12	11	21	25	23	15	201	
Unfit				1								1	2	
Ascaris														
Pos.	5	6	2	7	16	11	2	4	2	9	10	12	86	
Neg.										4			4	
Lamblia	3	1	1	1	8	6	1				1		22	
Oxyuris			2			1	1						4	
Tapeworm	3	1			2	1	1	1			2	2	13	
Trichiuris	11	9	5	5	13	14	8	8	6	16	9	11	115	1,481
Diphtheria:														
Swabs														
Neg.												3	3	
Cultures														
Pos.	34	35	38	9	7	4	6	14	24	59	63	38	331	
Neg.	68	73	193	89	42	28	37	34	41	129	106	170	1,010	
Doubtful	5	3	5		3	2		2		7	12	1	40	1,384
Gonorrhea:														
Pos.	15	12	12	14	14	12	16	17	22	18	13	14	179	
Neg.	24	18	24	23	21	20	21	27	16	28	28	29	279	
Unfit	1	3	2	3	3	1	4	2	3	1	3	1	27	485
Malaria:														
Pos.	5	6	4	13	13	11	13	3	14	6	8	7	103	
Neg.	247	199	239	269	269	245	217	187	166	182	144	127	2,491	
Unfit	6	5		1		5	1	1	1			2	22	2,616
Pathological:														
Malignant	2	3	1	2	4	3	2		1	1		5	24	
Non-Malig.	7	9	2	9	7	6	4	3	3	4	5	3	62	
Unfit	1				1	1							3	89
Rabies:														
Dogs														
Pos.		2	2	2	1		1	1	1	1	1		12	
Neg.	1			2	2	1			2				8	
Unfit						1							1	
Cats														
Pos.					1								1	
Neg.			1										1	
Cows														
Pos.				1		1							2	
Neg.				1									1	
Hogs														
Neg.					1								1	27
Tuberculosis:														
Pos.	24	14	28	28	20	22	17	20	22	18	22	11	246	
Neg.	60	59	77	98	66	70	74	54	59	65	42	52	776	1,022

STATEMENT OF SPECIMENS EXAMINED IN THE TAMPA LABORATORY
DURING 1914—Continued

Mat. Ex.	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Typhoid:														
Pos. Widal...	53	39	44	31	35	14	22	12	9	16	15	23	313	
Neg. Widal...	122	102	128	184	139	162	140	107	93	110	88	82	1,457	
Incomplete ..	23	15	16	12	20	15	12	22	12	10	7	5	169	1,939
Water:														
Pos.			1			1		1		2			5	
Neg.	2	3	10	5	3	4	2	5		5		4	43	48
Miscellaneous:														
Animal Inoculations:														
Tuberculosis:														
Neg.			1				2					1	4	
Rabies														
Pos.			1										1	
Neg.				2									2	7
Blood Counts:														
White	7		1	3					1	1	3	2	18	
Red											2	1	3	
Diff.	3			1			3	1	3	2	3	8	24	
Hb.												1	1	46
Leprosy:														
Pos.				1									1	
Neg.		1											1	2
Myiasis						1							1	1
Ophthalmia														
Pos.								1				2	3	
Neg.	1	1		1	2	2	3	1	1	1	1		14	17
Rat Plague:														
Neg.							88	84	609	666	516	168	2,131	2,131
Rat Leprosy:														
Pos.										4	3		7	7
Glanders:														
Pos.		1											1	
Neg.		1											1	2
Meningo-														
coccus:														
Neg.								1					1	1
Filaria:														
Neg.	1				1	1	1	1					5	5
Pus Specimens	1			4	3	2	2		2	1	1	1	17	17
Cultures for Pus Specimens			2	1			1			1			5	5
Urine	2		2	2	1			2					9	9
Diazo:														
Pos.		3	2	7	7	11	6	3	3	1	1	3	47	
Neg.	3	2	3	4	2	14	5	6	2	3		6	50	97
Oculta Blood:														
Pos.										2			2	2
	859	723	920	936	864	819	817	712	1,226	1,464	1,204	896		11,440

TABLE OF POSITIVE SPECIMENS EXAMINED SHOWING NUMBER RECEIVED FROM VARIOUS TOWNS OF THE STATE,
DURING 1914.

LABORATORY, STATE BOARD OF HEALTH, TAMPA, FLORIDA.

Tampa	1,046
West Tampa	76
Plant City	49
Lakeland	44
Wauchula	28
Fort Myers	24
St. Petersburg	23
Largo	11
Manatee	11
Palmetto	10
Arcadia	10
Bartow	9
Brooksville	7
Nocatee	7
Mulberry	6
Clearwater	5
Punta Gorda	5
Fort Ogden	5
Sarasota	4
Zephyrhills	4
Webster	4
Port Tampa	4
Fort Meade	3
Safety Harbor	3
Dade City	2
Kathleen	2
Bowling Green	2
Tarpon Springs	2
Avon Park	2
Brandon	2
Frost Proof	2
Mango	2
Bradentown	1
Fort Dade	1
Bushnell	1
Lutz	1
Daytona	1
Key West	1
Thonotosassa	1
River View	1
Limona	1
Blitchton	1
Inverness	1
Marco	1
Orient	1
Total	1,426

PENSACOLA LABORATORY, 1914 REPORT OF SPECIMENS

REPORT OF DR. F. A. BRINK

BACTERIOLOGIST PENSACOLA LABORATORY.

Pensacola Fla., Jan. 1, 1915.

DR. JOS. Y. PORTER,

State Health Officer, Through Dr. Henry Hanson, Senior Bacteriologist.

DEAR DOCTOR:—I hand you herewith the report of specimens examined in the Pensacola laboratory during the year 1914. This shows a total of 8,585 specimens examined, which is a large number of specimens for a one-man laboratory, and yet the work has not been intolerably arduous, since a large number of these specimens consisted of rats for plague and most of these were passed upon inspection. However, during the latter part of the year, this laboratory has been a *very* busy place.

Aside from the large number of rats examined, there has been no very great change in the number of specimens examined. There was a decrease in the number of specimens for diphtheria, though the decrease is more apparent than real on account of not entering the smears from swabs as separate specimens during the entire year. The great number of diphtheria specimens last year came from DeFuniak during their large epidemic. No such epidemic has occurred in this end of the State during the past year, but with that exception, the specimens have been more numerous, that is, diphtheria seems to have been more generally prevalent, without the occurrence of an epidemic.

Typhoid examinations, both positive and negative, were approximately twice as numerous last year as they were in 1913, indicating a greater prevalence of that disease.

Comparatively few milk examinations were made in the laboratory last year, and such specimens do not belong in a laboratory of this sort, of course.

Taken altogether, the work of the year seems to the writer to have been quite satisfactory.

Respectfully yours,

F. A. BRINK,
Bacteriologist.

	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Animal Parasites:														
Hookworm:														
Pos.	8	5	11	17	21	26	5	18	20	12	13	22	178	
Neg.	18	15	13	20	24	26	16	16	21	21	21	20	231	
Amoeba coli:														
Pos.		1	1	1								1	4	
Neg.		1			2	1	1	1		1		2	9	
Doubtful					1								1	
Ascaris Lumb.		1	1			2	1					1	6	
Oxyuris														
Vermis.		1	1			2	1					1	6	
Strongyloides														
Int.					1								1	
Tapeworms	2			1	1	1						1	6	
Lungworm, pig..			1										1	
Trichoceph.														
Disp.	1					6					1	1	9	453
Diphtheria:														
Swabs:														
Pos.									1	1	4	7	13	
Neg.							6	2		13	31	31	83	
Doubtful									1				1	
Cultures:														
Pos.	9	1		2		4	6		12	18	16	27	95	
Neg.	44	11	19	12	1	20	29	12	36	60	65	117	426	
Doubtful						1			1	3			5	623
Gonorrhea														
Pos.	8	12	8	15	14	10	9	3	10	9	13	21	132	
Neg.	22	19	39	21	13	33	12	19	26	20	19	43	286	
Unsatisfactory			1							1			2	421
Malaria:														
Pos.	1	1	2	2	1	10	6	1	2	4	1	4	35	
Neg.	18	14	34	25	45	68	51	33	34	40	39	30	431	
Unsatisfactory			1							1			2	468
Pathological:														
Malignant	1		1		1					1		1	5	
Nonmalignant			1	2			1	4		1	1	1	11	
Unsatisfactory		1											1	17
Rabies, Dog:														
Negative				1									1	1
Tuberculosis:														
Positive	7	2	12	9	5	7	11	7	4	7	7	9	87	
Negative	18	26	36	21	33	25	22	30	21	14	25	14	285	372
Typhoid:														
Positive	3	2	3	2	2	26	13	4	8	4	5	7	79	
Negative	9	7	27	15	37	55	47	38	41	28	19	25	348	
Incomplete		2			1		5			1	3	3	15	442

PENSACOLA LABORATORY, 1914 REPORT OF SPECIMENS—Continued

	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Water for sewage:														
Positive			3				6						9	
Negative			4	5	2	1		2			2	4	20	29
Blood Counts:														
Plain	1	4	3	7	7	1	4	3	5	4	5	6	50	
Diff.	4	3	3	9	3	4		2		2	3	4	37	87
Ophthalmia:														
Positive							1						1	1
Urinary analyses	11	5	2	5	7	1	14	3	3	21	12	22	106	106
Milk examinations	6		3	3	4	1	26	3	3	8		20	77	77
Rats for plague:														
Negative							1,375	2,273	1,323	481			5,452	5,452
Miscellaneous ...	3	7	2	7	2		2	1	1	5	4	2	36	36
Total.....	196	140	230	206	230	330	1,667	2,476	1,573	780	310	447	8,585	8,585

VETERINARY DEPARTMENT

REPORTS OF

DR. CHARLES F. DAWSON, Veterinarian.

DR. W. A. MUNSELL, Assistant Veterinarian.

DR. J. W. DEMILLY, Assistant Veterinarian.

REPORT OF VETERINARY DEPARTMENT

Jacksonville, Fla., December 31, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I have the honor to present the annual report of the Veterinary Division for 1914, which includes also the reports of Assistant Veterinarians Munsell and DeMilly.

They are respectfully presented for publication as a part of the Annual Report of the State Health Officer, for 1914.

The activities of the veterinary division have been increased along all lines heretofore mentioned, and much new work has been undertaken and carried out, as described in the following pages.

There is an ever-increasing amount of correspondence, which shows the veterinarian's office is becoming better known and more valuable to the general public. From a mere position where the veterinarian was called to your office occasionally, and where the incumbent gave a large portion of his time to private practice, the position now demands all his time, even though he has twelve assistants located in different parts of the State, whose work greatly relieves the pressure on your office. The services of these men, as well as the thirty-two Farm Demonstration Agents, are described in this report under proper heading. There is also given a list of unofficial agents who charge a small fee for the administration of the hog cholera serum furnished by the Board. Altogether, there are one hundred and thirty-eight persons who are directly connected with the work of the veterinary division.

As in past years, I take great pleasure in embracing this opportunity to thank you for the kind and courteous treatment accorded the personnel of the veterinary division.

Yours very respectfully,

CHAS. F. DAWSON, M.D., D.V.S.,
Veterinarian.

Charles F. Dawson, Veterinarian, Jacksonville
W. A. Munsell, 1st Assistant Veterinarian, Green Cove Springs
J. W. DeMilly, 2nd Assistant Veterinarian, Tallahassee

Organization of
the Veterinary
Division.

F. H. Armstrong, Pensacola
W. E. Grace, Jacksonville
J. K. Jones, Gainesville
W. P. Link, Tampa
T. J. Mahaffy, Jacksonville
F. W. Porter, Tampa
Major Schofield, Miami
H. A. Smith, Woodrow,
H. H. Spencer, Jacksonville
W. J. Tanner, St. Petersburg

Veterinary
Inspectors.

S. W. Hiatt, Gonzalez, Escambia County Live Stock Agents.

COUNTY	AGENT	ADDRESS	
Alachua	Stafford Burgis	Gainesville	County Farm Demonstration Agents. Also Hog Cholera Agents, giving free service.
Baker	E. W. Turner	Macclenny	
Bay	B. V. Mathis	Panama City	
Bradford	O. L. Mizell	Dukes	
Calhoun	J. E. Yon	Blountstown	
Citrus			
Clay	W. E. Brown	Green Cove Springs	
Columbia	J. D. Brown	Lake City	
DeSoto	Jos. Crews	Wauchula	
Duval	W. L. Watson	Jacksonville	
Escambia	S. W. Hiatt	Gonzalez	
Gadsden	M. C. Gardner	Greensboro	
Hamilton	S. S. Smith	Jennings	
Hernando	J. T. Daniel	Brooksville	
Hillsborough	R. T. Kelley	Plant City	
Holmes	C. A. Fulford	Bonifay	
Jackson	C. W. Belser	Marianna	
Jefferson	E. W. Lumpkin	Monticello	
LaFayette	D. C. Geiger	Mayo	
Lake	Wm. Gomme	Tavares	
Leon	Frank Robinson (col.)	Tallahassee	
Levy			
Liberty	A. W. Turner	Bristol	
Madison	D. R. McQuarrie	Madison	
Marion	S. J. McCully	Berlin	
Orange	C. H. Baker	Orlando	
Osceola	B. E. Evans	Kissimmee	
Pasco	I. E. Soar	Dade City	
Polk	A. A. Lewis	Kathleen	
Santa Rosa	O. O. Simmons	Botts	
St. Johns			
Sumter	G. L. Harrington	Bushnell	
Suwannee	T. Z. Atkeson	Live Oak	
Taylor	T. H. Stripling	Perry	
Walton	J. C. Smith	DeFuniak Springs	
Washington	D. G. McQuagge	Chipley	

List of unofficial
hog cholera agents
whose services
may be engaged
to treat hogs for
cholera, for a fee.

ALACHUA COUNTY

Alachua
J. E. Haynesworth
M. F. Studstill
Campville
Dr. G. W. Sherhouse
Micanopy
E. D. Matthews
Newberry
J. B. Smith
Rochelle
Dr. Geo. M. Floyd
Trenton
H. W. Arrington
Geo. Asbell
J. B. Smith

BAKER COUNTY

Maccleenny
R. C. Crews

BRADFORD COUNTY

Lawtey
Dr. G. W. Brown

CALHOUN COUNTY

Altha
C. A. Langford
Blountstown
J. L. Griffin
Henderson
T. Fields

CITRUS COUNTY

Citronelle
W. F. Sutton
W. F. Vause
Crystal River
J. T. Rawls
Floral City
Walter J. Young
Hernando
Dr. A. D. Puterbaugh
Homosassa
Mr. Croft

CLAY COUNTY

Belmore
E. E. Geiger
Green Cove Springs
J. L. Batten
Middleburg
M. M. West

COLUMBIA COUNTY

Benton
C. W. Cone
Lake City
J. B. Brown
P. G. Brown

DeSOTO COUNTY

Bowling Green
L. R. Sealey

Brownville

V. H. Freeman
J. F. Saxon
Fort Green
Dr. C. A. Gavin
Gardner
F. O. Baldwin
Limestone
A. Albritton
Murdock
W. J. Quick
Wauchula
Ira C. Williams

DUVAL COUNTY

Baldwin
J. H. Campbell
Broward
J. S. Higginbotham
Jacksonville
L. W. Dingman, R. F. D. 1
Grand Crossing

Mandarin
Dr. Geo. D. Kennedy

ESCAMBIA COUNTY

Atmore, Ala. (R. F. D.)
J. L. Godwin

GADSDEN COUNTY

Chattahoochee
J. L. Sunday, Jr.
Havana
M. E. McCorquadale
River Junction
J. H. McDonald

HAMILTON COUNTY

Jasper
Dr. J. H. Corbett
White Springs
H. R. Goodbred

HERNANDO COUNTY

Brooksville
W. G. Hope
A. P. McKeown

Istachatta

Dr. McKnight

HILLSBORO COUNTY

Durant
J. B. Hundley
Plant City
W. L. Holliday

Tampa

Dr. F. W. Porter
R. W. Weatherington,
1707 16th St.
Thonotosassa
R. W. Weatherington
Youmans
O. B. Wiggins

HOLMES COUNTY

Noma
Dr. R. B. Warren
Westville
Dr. D. G. Milton

JACKSON COUNTY

Campbellton
Dr. W. A. Parrish
Grand Ridge
W. J. Bradley
A. M. Singletary
Jacob
Dr. M. W. Eldridge
Sneads
A. J. Brunson

JEFFERSON COUNTY

Aucilla
Dr. W. N. McLeod
Lamont
Dr. W. H. Walker

LAFAYETTE COUNTY

Day
A. J. Fowler
Mallory
T. A. Fletcher

LEON COUNTY

Tallahassee
Centerville
Bradfordville
Miccousukee
Woodville
Chaires
G. H. Wilson
Tallahassee

SANTA ROSA COUNTY

Berrydale
J. M. Nobles
Jay
C. V. Mixon

Milton
D. W. T. Edger

ST. JOHNS COUNTY

Dewey
H. L. Manners, Bayard
Dupont
Dr. D. B. Brown
Durbin
H. L. Manners, Bayard
Elkton
Dr. F. S. Whitney
Hastings
Dr. A. Dolan

St. Augustine

Dr. B. A. Leak
Switzerland
H. L. Manners, Bayard

SUMTER COUNTY

Coleman
B. C. Bridges
Oxford
T. E. O'Dell
Webster
Dr. S. C. Wood

SUWANEE COUNTY

Dowling Park
Jno. P. Howland, Jr.
Live Oak
A. C. Johnson
Newburn
Jno. P. Howland, Jr.
O'Brien
Dr. J. H. Reynolds
T. C. Williams

Wellborn

A. S. Hogans
Dr. McClellan
Wilmarth
C. W. Cheshire

TAYLOR COUNTY

Perry
W. H. O. Johnson

VOLUSIA COUNTY

Bunnell
Favorita
Harwood
Hammond
Ormond
Seville
Volusia
Dr. D. B. Brown, Dupont

WAKULLA COUNTY

Sopchoppy
Chas. K. Allen
Wakulla
G. S. Neesmith

WALTON COUNTY

Floral, Ala. (R. F. D.)
P. S. McClung
Laurel Hill
J. B. Steel

WASHINGTON COUNTY

Chipley
Dr. J. G. Phillips

Hog Cholera.

In compliance with Chapter 6167, Laws of Florida, 1911, the State Board of Health began, in August of that year, the distribution free to all farmer-applicants, of serum to any amount asked for. By the end of the year, comprising a period of five months, the serum distributed cost the State \$2,580.00. For the year 1912, the serum cost \$12,253.00. For the year 1913, the serum cost \$8,120.00. For the present year, serum has cost over \$21,000.00.

During the latter part of the year, the demand increased so rapidly that the Board deemed it necessary to limit the amount of serum an applicant may receive, in any twelve months to 1000 c.c. or about a quart, offering, at the same time, to sell those who might require more than the allowance, the serum at cost price, in any amount. Arrangements have also been made to furnish syringes, thermometer and disinfectant used in the work of applying the "serum-simultaneous method" at cost prices, also.

The Veterinarians of the Board have made frequent demonstrations of the method employed in administering serum and virus, in various localities, but for obvious reasons could not undertake to treat hogs, all over the state. Whenever a veterinarian of the Board has visited a locality and demonstrated the methods, someone has been appointed an agent for that locality, so that farmers can secure his services for a small fee. Much of the work has been done by the County Farm Demonstration Agents, who are paid for their services in demonstrating the various improved methods of agricultural operations by the Federal, State and County governments. A class composed of these agents was instructed in the "serum-simultaneous method" by the writer at a meeting held at the University of Florida. The Federal Government has had a special agent in the field during the year, giving demonstrations and lectures upon the subject at Farmers' Institutes, under the auspices of the University of Florida. It is thus seen the subject of Hog Cholera has not been allowed to suffer from want of advertisement. What is wanted now, is more men in the field to teach and do the actual work of inoculating the hogs. It is all very well to tell a farmer how something ought to be done. Some of them will need only this word-of-mouth

More trained men
needed to do hog
cholera serum
work.

instruction, but the vast majority are at sea with a hypodermatic syringe in hand. He is awkward in using it, may break the needles, make the injection badly, and is almost sure to break the syringe in the end. He then requires a week or a month before he can get to work again, and then it is often too late to save his hogs.

The work can only be properly done by men who have become expert, as in other lines, and for this much more practical instruction is needed. The writer believes there should be a man in every precinct, the smallest political division of the State, thoroughly competent from much instruction and practical experience, to actually do this work, not for the large owner only, but for everybody who will have it done. It appears that we are merely scratching over the surface at present. It is a gigantic work, on which the hog industry largely depends. The State cannot afford to cover the ground. It must be done by the people themselves; but the State can give the instruction, and so help the farmer to help himself. In every locality there are men who do the castrations for the neighborhood, and there ought to be men in every locality to vaccinate hogs. The Board has done much toward this end, but much more needs being done. More system is needed. A visit to a man's place to vaccinate his hogs amounts to nothing of permanent value to that man, but the saving of all or a few of his hogs, for the time being. Unless we have taught him how to do this work in the future, it is travel expenses and serum largely wasted, for the State. The job is a perpetual one. The results can be measured in dollars and cents. Hence more is the reason for his doing his own work, and the State has done him a good turn when it has instructed him in the method, and demonstrated to him the value of the method. It is cheap hog insurance which he can afford to go to some expense for. Of considerable importance, also, is the fact that the owner can, under these conditions, have his hogs vaccinated at opportune times. He does not have to await the arrival of an agent from a distance, or take his chance of getting his hogs vaccinated when it is his turn, as is now the case.

With the organization now in the field working systematically, instead of at random, the whole State could be

covered in a year, possibly. A thousand men, one in each precinct, thoroughly coached in the "serum-simultaneous method" by our veterinarians and the Farm Demonstration Agents would be able to make a tremendous showing for the hog industry of Florida.

Anything short of this thoroughness, outlined, means no general progress and only success here and there. Farmers could get together in every precinct, form hog clubs, and vaccinate all the hogs in their respective communities, co-operating as they sometimes do in other lines. In this way they become independent, both of man and of the disease, as hogs properly vaccinated do not die from hog cholera. By demonstrating the protective qualities of the treatment, the farmer soon sees a good reason to improve the breed and to raise more hogs, and something to feed them on, and general agriculture is correspondingly benefited.

Methods of
employing the
serum.

There are three methods of treating hogs for cholera. They are: The first, the "Single Serum Method," which consists of a single injection of serum. This method is to be used in cases where the disease is already existing, and where the hogs, therefore, are already infected, or where they are daily in contact with infected hogs, or are on infected premises, and is the method most in vogue, at present.

The second or "Serum-Simultaneous Method" is employed to best advantage where the owner wishes to prevent a natural outbreak of the disease in well hogs. The method is attended with some little danger of causing the disease in a fatal form, because it consists in the simultaneous injections of serum and hog cholera virus. This method should be employed only where the hogs are valuable, or where the owner will go to a little trouble in management a few days before and after treatment. It should be realized by the owner that in using any method in which virus is employed, he is infecting his premises with the germ of hog cholera, and that succeeding generations of hogs may catch the disease in this way, unless they, too, are likewise treated.

The third or "Double Method" consists of a preliminary injection of serum, as in the Single Method. Ten days later a larger dose of serum and virus are injected as in the Serum-

Simultaneous Method. We thus see that the "Double Method" is a combination of the two foregoing methods. It is the safest method, as the preliminary dose of serum protects the hog from a possible sickness from the injection of the virus, later.

The following resolutions adopted at a meeting of State and Federal Veterinarians held in Chicago on the 3rd of March 1914, at which meeting the writer was present, represent the attitude of the veterinary profession upon the subject of hog-cholera control by the use of the serum.

Resolutions of
Federal and State
Veterinarians.

"We regard hog cholera as one of the greatest questions before the public at this time. The disease has been prevalent many years, with losses fluctuating between wide limits. The heaviest losses, as shown by the best available data, were 120 and 130 hogs per thousand in 1887 and 1897, respectively. The estimates for 1913 are 100 loss per thousand, and the indications are that the disease is passing through another period of rapid increase. In view of the high cost of living, such enormous losses of a valued food product must be regarded as a calamity.

"The main problem at this time is to control the disease. With progress now being made, both in science and practice, it may be expected that the question of eradication will come up later; but, unquestionably, the matter of control will be uppermost for years to come.

"For success, the first requirement is an honest and earnest purpose to co-operate as between all the interests involved, especially the scientists, the veterinary profession, farmers, common carriers, and packing interests.

"The control and final eradication of hog cholera will depend largely upon the education of farmers to the importance of observing sanitary principles.

"The serum alone treatment may be given by anyone without danger of causing hog Cholera. Such harm as follows this treatment is due mostly to ignorance in the use of serum or of sanitation. While it is preferable to have serum used only by competent veterinarians, it is not deemed advisable to require that laymen may not use serum alone.

"The closest possible supervision of the manufacture and distribution of serum should be provided, to assure its purity and potency. It is believed that this should be in charge of federal authorities in such plants as may properly come under their supervision, and provision should be made in the different states to duplicate and supplement the federal efforts along this line.

"It is desirable for the states to manufacture serum, but neither by the size of the plant nor by the price of the product, should this effort be monopolized by the states.

"The simultaneous treatment should be used only by those who have had special training. The ideal arrangement would be to allow its use only by federal and state veterinary officers. Other officers who have sufficient training in the use of virus, and in sanitation, may use the simultaneous treatment with safety. Where it is not possible to restrict virus to official hands because of shortage of funds or lack of officers, or for other uncontrollable reason, it should then be used only by such other persons as have been given a special permit after receiving special instruction, which is as thorough and detailed as feasible, and who show that they understand the essential fundamental principles. But in any such case, the unofficial layman should be permitted to use virus only in his own herd, and then only if the district is already infected.

"The manufacture, distribution and use of virus should be rigidly supervised by federal and state authorities.

"Quarantine and sanitary measures should be much more actively emphasized and enforced. Especially, it is important that freight cars which have carried infected stock shall be promptly disinfected after unloading, and infected premises should be rigidly quarantined.

"The prevailing practice of rushing sick herds to market should be discouraged in every way possible, and in lieu of such disposal of sick herds, the owners and other persons concerned should be advised and encouraged to treat them with anti-hog cholera serum.

"The promulgation and enforcement of all live stock sanitary regulations and other measures incident to quarantine

should remain invested in the live stock sanitary boards and state veterinarians of the various states.

"Progress in combating hog cholera is being made. Special credit is due to individual efforts on the part of veterinarians and farmers. The intelligent interest of county agricultural agents is commended, and it is believed that these agents should give chief attention to assisting farmers to secure the aid of competent veterinarians, and when that is not possible, they should assist the farmers themselves to take proper remedial measures, always emphasizing the importance of sanitation. There is recommended the temporary assignment of a competent veterinarian by the state government, independently or in co-operation with the federal government, to any district where difficulties on account of hog cholera are most acute, his services to be available to farmers without cost, for the purpose of demonstrating the best methods in different communities.

"Work of the highest character is being done by the United States Bureau of Animal Industry, which Bureau brought out the serum treatment for hog cholera, a treatment which has been adopted in most states and countries where the disease exists. We acknowledge with appreciation the action of Congress, whereby far more liberal provision than even before has been made to investigate and combat the ravages of hog cholera. Similar provision has been made in several states, but the legislatures are urged to make more liberal appropriations of this character.

"There should be the closest co-operation between state and federal authorities, and all persons concerned should be willing to suppress their own opinions on relatively unimportant matters, and follow the lead of federal authorities in the interest of the adoption of uniform methods throughout the entire country."

Hog Cholera
Statistics.

The following statistics from Federal sources were kindly supplied by Dr. George F. Babb, Inspector of the Bureau of Animal Industry, for this report.

Loss per thousand from cholera.	1912	1913	1912	1913	
Florida	170	150	Iowa	160	255
Georgia	165	90	Minnesota	55	214
Alabama	110	100	Nebraska	110	175
Mississippi	154	104	South Dakota....	38	230
Missouri	175	90	All United States.	110	119

Florida's Loss
from Cholera, 1913

135,600 hogs died of cholera.

\$813,600 value of hogs at \$6.00 per head.

13,560,000 pounds hogs lost, 100 pounds per head.

10,848,000 pounds meat and lard lost,

13¼ pounds per head of Florida population.

Florida as a hog
raising State.

Third in average loss for 30 years.

First in loss per thousand, 1912.

Fourth in loss per thousand, 1913.

Twenty-third in number of hogs in state.

Sixth in average number of hogs on farm.

Comparison of
Southern States.

	Position in number of hogs	Percent lost 1912	Percent lost 1913	Average number of hogs on farm
South Carolina.....	26th	6.5	6.4	3.8
Florida	23rd	17.	15.	16.2
Alabama	16th	11.	10.	9.7
Mississippi	15th	15.4	10.3	4.7
Georgia	10th	16.5	9.7	3.8

Hog Cholera
Sanitation.

It is conceded that hog cholera is disseminated by a number of ways that can be eliminated by the observance of the ordinary precautions that are taken to control the spread of other diseases.

Some of these dangers to the hog industry are as follows: By pigeons, buzzards and other carrion-eating birds; by dogs; by water courses; by infected pork scraps from hotels; by the owners of sick herds visiting their neighbor's premises, to which hogs have access; by hog-cholera agents who do not take the necessary precautions in disinfecting hands, feet and clothing when leaving an infected herd; leaving the carcasses of hogs, dead from cholera, unburied or unburned, to be eaten by dogs and birds.

These dangers may be entirely removed, or minimized, by burning or burying deeply, all hogs that die from hog cholera; by exterminating buzzards and crows; by keeping the dogs at home; by keeping sick hogs, and hogs that die from cholera, away from water courses; by boiling all scrap and swill fed the hogs; by placarding farms that are infected with hog cholera; by requiring vaccinators to disinfect feet, hands and clothing before coming on one's farm to vaccinate hogs, and by the liberal use of disinfectants and cleaning up the pens, lime being, according to experience, a cheap and reliable substance, when liberally applied to pens and fencing. It is also very important to immediately segregate the sick from the well as soon as cholera is discovered.

In 261 outbreaks of hog cholera, in the State of Indiana, it was determined that the disease was spread by the following agencies:

39 times by owners of well herds visiting diseased herds.....	14.9%
20 times by owners of diseased herds visiting well herds.....	7.7%
16 times by dogs	6.1%
10 times by buzzards	3.8%
36 times by pigeons	13.8%
12 times by purchase of new stock.....	4.6%
28 times by being harbored on premises from previous cases...	10.7%
31 times by sick hogs in pens adjacent to well ones.....	11.9%
14 times by exchange work.....	5.4%
8 times by streams	3.1%
3 times by crows	1.2%
1 time by railroad running through premises.....	0.4%
1 time by hunters.....	0.4%
42 times by ways not determined.....	16.7%

The following mixture is recommended for worms in hogs; being kept before them all the time:

Prescription for
worms in hogs.

To prevent worms, keep the following charcoal mixture before the pigs all the time:

Charcoal, 1 bushel,
Hardwood ashes, 1 bushel,
Salt, 8 pounds,
Air slacked lime, 8 pounds,
Sulphur, 4 pounds,
Pulverized copperas, 2 pounds.

First mix the lime, salt and sulphur thoroughly, and then mix in the charcoal and ashes. Dissolve the copperas in 2 quarts of hot water and sprinkle it over the whole mass, mixing

thoroughly. Store this in a barrel under shelter, and keep some of it in an open shallow box where the hogs can get it as they wish.

Transmission of
hog cholera
by buzzards.

It is frequently stated in publications on hog cholera, and it is generally accepted as true, that buzzards are an agency for the spread of the disease.

In 1912, Dr. Hiram Byrd and the writer carried out an experiment to determine if buzzards carry the virus of hog cholera in their feces. The results of this experiment were published in the Annual Report of the State Health Officer, for 1912. We showed that the virus of hog cholera is digested in the intestinal tract of buzzards, and that the droppings of buzzards fed on the flesh of hogs dead from cholera do not produce cholera, when mixed in the feed of hogs. The Louisiana Agricultural Experiment Station has demonstrated that some other germs of disease in farm animals meet a like fate in the intestinal tract of buzzards.

While the buzzard does not carry hog cholera in its droppings, it seems highly probable that the buzzard does carry the virus, not only of hog cholera, but of many other diseases as well, on its feet and feathers, and in its vomitus. To determine the correctness of the views of others, as well as of the writer, the following experiment, approved by the State Health Officer, was carried out: Two high-grade Berkshire pigs, weighing about fifty pounds, were procured from the Florida Agricultural Experiment Station, at which place hog cholera has not existed. They were, therefore, susceptible to hog cholera. The pigs were placed in our new animal house, and were the first animals to occupy the veterinary section of the building. In order to exclude the possibility of the pigs having become infected with hog cholera en route from Gainesville to Jacksonville, they were kept under observation for seven days, during which time they ran a normal temperature, and seemed in normal condition.

Two buzzards were received from Assistant Veterinarian DeMilly, of Tallahassee. These were smeared with hog cholera virus received from State Veterinarian White, of Tennessee, and were then placed in the stall occupied by the pigs. They were kept in association with the pigs three days.

On the second day the birds were removed from the stall and fed meat infected with the Tennessee virus. They were then replaced in the stall, and almost immediately vomited the infected meat. The pigs ate the vomited meat within a few minutes, the boar getting, by far, the larger portion. Therefore, this experiment could only show that the disease is carried by the vomitus, or by the infected feet and feathers. It will be necessary to experiment further to show whether the disease is carried in both ways.

As neither pig died as a result of their association with the buzzards, and as the microbe of hog cholera is unknown, the diagnosis of hog cholera, in this case must be made from the clinical history, which was that of a mild, acute attack of hog cholera of short duration, such as frequently occurs when hogs are vaccinated by the so-called "simultaneous method." A post-mortem examination is, in all cases, absolutely necessary to determine if a hog died of cholera.

The following is the record of the experiment:

May 13, 1914. Two pigs received from the Florida Agricultural Experiment Station, and placed in a stall in the new animal house. Fed on corn, bran and shorts slop. Appetite perfect, and animals appear in perfect health.

May 21, 1914. Two buzzards received from Tallahassee. After being infected with virus of hog cholera, received from Tennessee, were placed in the stall with the pigs. Temperature of boar was 102.6 degrees F., and of the sow, 102.2 degrees F.

May 22nd, 1914. Buzzards were removed from the stall and fed on meat infected artificially with hog-cholera virus, which they ate readily. Buzzards replaced in the stall with the pigs. They soon vomited the infected meat, and the same was eaten by the pigs, the boar getting, by far, the larger share. (It may be remarked here that the ease with which buzzards vomit or regurgitate their food is remarkable, and they do this on the slightest provocation. Handling them will bring about the act. It is probably a provision of nature for lightening their bodies, when it is necessary to suddenly take to flight to avoid danger.)

May 23, 1914. Temperature of boar in the afternoon, 102.3 degrees F.; of the sow, 102.6 degrees F. Buzzards removed, killed and cremated.

May 24, 1914. No observations. (Sunday.)

May 25, 1914. (Fifth day after exposure.) Morning temperature of boar, 102.4 degrees F.; of sow, 103.3 degrees F.

May 26, 1914. (Sixth day after exposure.) Morning temperature of boar 104.6 degrees F. Afternoon temperature, 104 degrees F. Morning temperature of sow, 102.6 degrees F.; afternoon temperature, 103 degrees F. Both animals languid and somewhat "off feed."

May 27, 1914. (Seventh day after exposure.) Morning temperature of boar, 105.2 degrees F. Sow, 102.5 degrees F. Boar refuses all feed. Sow eats. Eyes of both lose lustre.

May 28, 1914. (Eighth day after exposure.) Morning temperature of boar 106 degrees F. Afternoon, 106 degrees F. Morning temperature of sow, 103.5 degrees F. Afternoon temperature, 103.5 degrees F. Boar quite sick, eats nothing, and shows some emaciation. Sow eats.

May 29, 1914. (Ninth day after exposure.) Morning temperature of boar, 103.5 degrees F. Afternoon temperature, 102.4 degrees F. Boar is much improved. Returns to his feed. Morning temperature of sow, 103.2 degrees F. Afternoon 102.7 degrees F. Eat well.

May 30, 1914. (Tenth day after exposure.) Morning temperature of boar, 104 degrees F. Afternoon, 104 degrees F. Morning temperature of sow 103 degrees F. Afternoon temperature, 102.5 degrees F. Both pigs much improved.

May 31, 1914. (Eleventh day after exposure). No observations.

June 1, 1914. (Twelfth day after exposure.) Boar's temperature 102 degrees F. Sow's temperature, 102.2 degrees F.

June 2, 1914. Both pigs seem to have recovered. Both eat well. Boar lost considerable flesh. Sow is in fair condition. Both animals disposed of, as immunes.

The following statistical tables will indicate the activities of the Board in the distribution of hog cholera serum, in 1914:

Hog cholera
serum statistics.

County	C. C. Serum Distributed	C. C. Virus Distributed	Estimated No. Hogs Treated	Estimated Weight of Hogs Trtd.
Alachua	169,010 c.c.	350 c.c.	6,785	449,250 lbs.
Baker	650 c.c.	... c.c.	33	1,650 lbs.
Bay	750 c.c.	... c.c.	34	2,074 lbs.
Bradford	102,800 c.c.	100 c.c.	4,310	279,899 lbs.
Brevard .....	... c.c.	... c.c.	...	... lbs.
Calhoun	3,250 c.c.	... c.c.	134	9,574 lbs.
Citrus	7,650 c.c.	... c.c.	357	16,980 lbs.
Clay	5,050 c.c.	... c.c.	243	11,672 lbs.
Columbia	33,200 c.c.	... c.c.	1,374	87,984 lbs.
Dade	2,200 c.c.	... c.c.	136	7,640 lbs.
DeSoto	66,050 c.c.	50 c.c.	2,859	183,594 lbs.
Duval	7,700 c.c.	... c.c.	300	21,751 lbs.
Escambia	34,080 c.c.	250 c.c.	1,432	92,268 lbs.
Franklin .....	... c.c.	... c.c.	...	... lbs.
Gadsden	34,000 c.c.	... c.c.	1,437	92,979 lbs.
Hamilton	100,475 c.c.	... c.c.	3,947	262,379 lbs.
Hernando	67,400 c.c.	450 c.c.	2,843	180,336 lbs.
Hillsborough	60,600 c.c.	... c.c.	2,542	146,954 lbs.
Holmes	6,850 c.c.	50 c.c.	296	18,476 lbs.
Jackson	105,965 c.c.	50 c.c.	4,662	246,352 lbs.
Jefferson	6,650 c.c.	... c.c.	295	18,122 lbs.
Lafayette	68,900 c.c.	50 c.c.	3,037	189,615 lbs.
Lake	9,050 c.c.	... c.c.	345	19,900 lbs.
Lee .....	... c.c.	... c.c.	...	... lbs.
Leon	9,750 c.c.	... c.c.	403	34,610 lbs.
Levy	83,650 c.c.	100 c.c.	3,376	189,761 lbs.
Liberty	39,200 c.c.	... c.c.	1,669	98,287 lbs.
Madison	41,000 c.c.	50 c.c.	1,713	113,226 lbs.
Manatee .....	... c.c.	... c.c.	...	... lbs.
Marion	108,800 c.c.	650 c.c.	4,847	273,673 lbs.
Monroe	3,750 c.c.	... c.c.	150	9,750 lbs.
Nassau .....	... c.c.	... c.c.	...	... lbs.
Orange	700 c.c.	... c.c.	17	2,250 lbs.
Osceola	27,700 c.c.	50 c.c.	1,126	76,022 lbs.
Palm Beach .....	... c.c.	... c.c.	...	... lbs.
Pasco	12,200 c.c.	... c.c.	421	28,583 lbs.
Pinellas	3,950 c.c.	... c.c.	176	9,979 lbs.
Polk	22,900 c.c.	50 c.c.	976	60,695 lbs.
Putnam	2,050 c.c.	... c.c.	87	4,900 lbs.
Santa Rosa	11,475 c.c.	... c.c.	375	30,765 lbs.
Seminole	500 c.c.	... c.c.	17	1,275 lbs.
St. Johns	13,900 c.c.	50 c.c.	539	41,605 lbs.
St. Lucie	500 c.c.	... c.c.	22	1,375 lbs.
Sumter	55,600 c.c.	100 c.c.	2,094	144,470 lbs.
Suwannee	141,210 c.c.	200 c.c.	5,765	366,394 lbs.
Taylor	17,000 c.c.	... c.c.	746	48,217 lbs.
Volusia	15,650 c.c.	... c.c.	627	41,956 lbs.
Wakulla	1,500 c.c.	... c.c.	75	3,000 lbs.
Walton	7,500 c.c.	... c.c.	348	18,090 lbs.
Washington	16,410 c.c.	100 c.c.	747	42,984 lbs.
Totals	1,529,175 c.c.*	2,700 c.c.†	63,717 hogs‡	3,981,316 lbs.

*5,350 c.c. serum sold at cost

†150 c.c. virus sold at cost

‡As hog cholera serum is supplied only by application on standard application blank of the State Board of Health, giving number of hogs to be treated, etc., and as all serum is labeled for immediate use, this number is believed to be fairly accurate as representing hogs treated during 1914.

Distribution of
Hog Cholera
Serum and Virus
in Florida in
1914.

Tick Eradication
Movement.

Although nothing has been done officially in the actual eradication of the cattle tick, it is evident, on all sides, that the public is becoming more and more familiar with the benefits accruing from the eradication of this parasite. One hears frequently, now, that there is one thing Florida must do, and that is, we must raise more and better cattle and hogs. This Board has already done much in both these lines; but force of circumstances has placed the hog before the cow, because, of the two great diseases affecting these animals, hog cholera and tick fever, the former seems more urgent. The hog requires one year to mature, while the steer requires two or three. The hog is therefore the ready-money animal crop. The wide distribution of the dipping vat in the State, from Pensacola to Miami, shows, however, that the tick-eradication movement, while seemingly dormant, is here to stay. There are fifty of these vats now in the State. There may be several of which we have no record.

Dade County is to be the first Florida county to eradicate the cow tick, even if she is not a cattle county. The movement was initiated there by Dr. J. G. DuPuis, Lemon City, after he had a bitter experience in trying to maintain a decent herd of cattle. He should be highly commended for the enthusiasm with which he has gone ahead and overcome all obstacles and opposition to his plans. The County Commissioners of Dade County, taking advantage of the provisions of the tick-eradication law, appropriated a sum of money, which, added to other subscriptions, will build vats enough to dip every cow in Dade County once every two weeks. As this is the case, it will only take four or five months to eradicate the tick from that county. All the cattle in the county are dairy animals and all the dairymen are in favor of the project. These cattle are all located near Miami, with the exception of a few cows in the other towns located along the railroad. The people there have, at present, nothing to sell out of the county, so their benefits will come only from being able to fetch decent dairy animals into the county, and have them live and thrive the same as they would elsewhere in the world, all things being equal. When it becomes known and appreciated to its full extent that in Dade County good cattle are being

produced on her Everglades prairie land, covered with a heavy growth of good grazing grasses that man has planted there, and that this change has been wrought through the eradication of the cattle tick, Dade County will become as famous for her live stock as she is now for her citrus fruits. Cattlemen from other counties will find it profitable to rent these tick-free pastures, free their cattle of the tick and ship them into Dade County to fatten for the market. From Dade the movement will spread to other counties, and we may then expect Florida to rapidly fall into line with the other States and get rid of this great menace to her cattle industry. Thus we shall see that tick eradication began in Florida, in a county that really had no cattle industry strange as it may seem. Other counties where cattle constitute an important source of income are backward in the movement, showing little or no interest in the matter, and would probably oppose any active plans for tick eradication under approved methods, until convinced that it will pay, in Florida, as it has elsewhere.

The work of vat construction is progressing as fast as weather and other conditions will permit. It is intended to build the half dozen vats that are necessary before starting the work. It is better to start dipping at the onset of warm weather, as that is the time to hit the tick—when it is hatching out on schedule time.

Vat construction.

As soon as the work of dipping commences, this Board will be requested to quarantine all other ticky territory in the United States, and no ticky cattle will be allowed to be shipped, driven or drifted into Dade County. All cattle entering that county must be certified by the proper authorities as having been properly dipped to kill ticks.

This quarantine will remain in force until all other territory in the United States, including Florida, is freed of the tick, and declared to be free by the Secretary of Agriculture.

The State Board of Health has ample authority to proceed with its part of the work and will, no doubt, do so when the people indicate a willingness to have the work started. The question of "getting ready" to eradicate ticks consists only of building the vats. We shall never get ready by writing about it, any more than a farmer plants a crop by

telling his neighbors that he is going to do so. He must prepare the soil and put the seed in the ground. Likewise, we must build the vats, fill them with arsenical solution, and make the cattle swim through them, once, regularly, every two weeks for five months. Then, and not until then, shall we be eradicating ticks in Florida.

Breeders frequently give as a reason for not eradicating ticks from their herds that if they do not raise their stock to be tick-proof, they will die when sold to customers whose other cattle are ticky, and they will, therefore, lose their trade. This is perfectly true, and their reason is a good one; but why not look at the question from another point of view; one that will permit the breeder to raise a better line of breeding stock, under tick-free conditions, to be sold for service in herds that are tick-free. Why allow a disease to exist in our cattle, when it can be so easily and cheaply cured? The important point in the matter is that ticks cause a serious blood disease in cattle. The amount of blood abstracted by the tick is of little importance, when compared with the disease-producing property of the tick.

At the first meeting of the Florida Live Stock Association, a committee was appointed to draft a Constitution and By-Laws for the formation of County Cattle Improvement Clubs that it is intended shall exist in every county in the State. These clubs are expected to be the nucleus around which sentiment for tick-eradication will be developed. This Constitution and By-Laws have been adopted by all the clubs that have been formed. They are as follows:

Constitution. This organization shall be known as the.....
County Live Stock Club.

Object. The object shall be the encouragement of Live Stock industry of the County, and to act as a part of the Florida State Live Stock Association.

Methods. The means by which these beneficial results are to be attained shall be educational, and accomplished by meetings held at stated times, by dissemination of printed information, correspondence, and by securing a proper recognition of the Live Stock Industry from our legislature.

The officers of the Club shall consist of a President, a Vice-President, and a Secretary-Treasurer, who shall be elected annually by the members assembled in convention, and who shall hold office until their successors are properly elected. The election shall be by ballot or majority vote. Officers.

The President, Vice-President and Secretary-Treasurer, shall perform such duties as are usual for such officers. They shall also compose the Executive Committee of the Club.

All white residents of the County, male or female, shall be eligible to membership in this Association upon the payment of an annual fee of \$1.00. Membership.

The Club shall hold an annual meeting each year, at which time election of officers shall take place; and shall hold monthly or quarterly meeting at such times as desirable, upon call by the Executive Committee. Meetings.

1. The annual membership fees of the Club shall be due and payable in January of each year. By-Laws.

2. No member shall be allowed to participate in the business meetings of the Club who is one year in arrears with his annual dues.

3. Changes in the Constitution may be made at any regular meeting by a two-thirds vote of all members present.

4. Seven members shall constitute a quorum for the transaction of business.

5. If any vacancies in office should occur, the President shall fill the vacancy by appointment until the next annual meeting.

6. The place and time of all meetings shall be selected by the Executive Committee.

7. It shall be the duty of the Executive Committee to arrange the program for all meetings.

8. No moneys shall be paid out of the treasury unless authorized by the Executive Committee.

9. At least one-fourth of the dues collected, or such additional proportion as determined by the Club, shall be remitted annually to the Treasurer of the Florida Live Stock Association, for general expenses of State work.

10. Such delegates as requested shall be elected annually to represent the Club at the meetings of the Florida State Live Stock Association.

Glanders.

Florida has been more fortunate this year than last, in having fewer outbreaks of this disease. As against 62 cases, fifty of which occurred in and around Jacksonville, in 1913, there have been only 23 cases in 1914. These were widely distributed; but as in 1913, more cases were found in Duval than in any other county. This should be expected, as more horses and mules come to Jacksonville market than to others. The cost of glanders to the State, in condemnations alone, was \$1,650.00 as against \$5,000.00 in 1913.

The acceptance of the new mallein test and the more general care on the part of the railroads in accepting shipments, added to the regulations adopted by the Board, which require mallein tests to be made upon every horse or mule shipped into the State, is having a salutary effect upon the spread of glanders. With prompt destruction of all open cases, a test of all exposed stock, and the rigid enforcement of our regulations, there is little reason to fear this disease. The people are entitled to the protection afforded by our regulations. They effectually check the pernicious practice of dealing in glandered stock. They protect the dealer, the trader, the farmer, the lumber and turpentine operator. They force the glandered "stuff" back to the man who breeds it on the horse ranches of the West and Northwest. The test, faithfully carried out on all horses, would, in a few years, eradicate this most important disease of the horse.

CASES OF GLANDERS DURING THE YEAR 1914

County	Town	Month	Number Animals	Reimbursement
DeSoto	Brownville	January	One mule	\$75.00
Duval	Jacksonville	January	One horse	75.00
Duval	Jacksonville	January	One horse	75.00
Duval	Whitehouse	January	One horse	75.00
Duval	Jacksonville	February	One horse	75.00
Duval	Jacksonville	February	One horse	75.00
Hillsborough	Tampa	February	Two horses	150.00
Orange	Orlando	February	One horse	75.00
Duval	Marietta	March	One horse	75.00
Duval	Jacksonville	March	One horse	75.00
St. Johns	Durbin	April	Two mules	150.00
Hillsborough	Tampa	April	Two horses, two mules	300.00
Duval	Jacksonville	June	One horse	75.00
Duval	Jacksonville	July	One horse	75.00
Seminole	Sanford	July	One mule	75.00
Duval	Jacksonville	September	One horse	75.00
Putnam	Palatka	September	One horse	75.00
St. Johns	Hastings	November	One horse	.....
Total			23	\$1,650.00

(Their relation to so-called "Black Tongue" in dogs.)

(This investigation was made in collaboration with Dr. B. M. Bishop, of Holder, Florida, and was published in "Health Notes," October, 1914.)

Hookworm in
dogs.

That the hookworm, *Uncinaria canina*, is a common inhabitant of intestine in dogs and cats is a well known fact. According to Dr. Stiles, *Uncinariasis* is a very common disease in dogs in Washington, D. C., and the same author states that from 25 to 40 per cent of the pups born in some parts of the United States die from hookworm disease. The parasite causes a disease known as "Typhoid" in cats.

Examination of the excrement of dogs in Jacksonville and elsewhere showed an infestation with the eggs and larvae of hookworms. The dogs which furnished the samples were, in most cases, healthy and running at large, while in two cases they were patients in a hospital and being treated for other troubles, presumably.

Recently, a dog owned by one of us died of Black Tongue and was examined, in part, in the bacteriological laboratory, Dr. Hanson, Bacteriologist, assisting in the examination. The bowel showed a heavy infestation of hookworms. The lesions produced by the worms in the bowel were the only noticeable departure from a normal condition of the body.

As this observation was considered of great importance in throwing light upon this mysterious disease, the treatment of several similarly-affected dogs was at once instituted, upon the theory that the disease Black Tongue is an acute form of Uncinariasis. The dogs were given the thymol-salts treatment, with the result that they all recovered, showing the marked improvement noticeable in successfully treated cases in the human being. Both from a pathological and from the sportsman's standpoint, this observation is of great interest, because the disease known as Black Tongue has prevailed here for many years and no theory as to its cause that was worthy of credence has ever before been advanced.

The sportsman and dog owner has realized that this disease is the bane of canine life in Florida. It is hoped that dog owners will take up the question and have their dogs affected with Black Tongue treated for hookworms, according to the plan suggested in this article, and report the results to the State Board of Health.

It may be well to give the symptoms we have found present in what we recognize as Black Tongue.

Symptoms.

The most certain method of diagnosis is the examination of the excrement for eggs and larvae, by the microscope. Those who are not equipped to make this examination may forward a small sample of freshly-voided excrement to the Veterinarian of the State Board of Health, Jacksonville, Fla., with notice of shipment. Send excrement as passed, and not in a liquid. Repeated shipments during treatments will be necessary for determining when the dog is free of the worm.

The most prominent symptom first noticed is paleness of the tongue and other mouth parts; abnormal desire for articles that dogs do not usually eat, such as dirt, clay, manure and other filth. A cough develops. Vomiting is present. Dribbling of saliva occurs throughout the disease. It is thick and ropy, and when mixed with dirt causes a very unclean appearance of the mouth. Champing of the jaws is present, and this causes abrasions of the tongue, which becomes infected, as do the other tissues, and we then note "sore mouth," with loss of appetite and inability to swallow. The breath becomes very offensive, as does also the vomitus and excrement, which

in many cases consist almost solely of blood, mucus and bile. The skin is in the condition known as "hide-bound" in severe cases. There is general weakness of the body, which manifests itself more particularly in the limbs, and this increases, along with other symptoms up to the point of death, which is usually an easy one.

The existence of skin lesions, "ground itch," is not a constant lesion in dogs or in cattle infested with hookworms. This is readily understood when one considers the comparative insensitiveness of the animal hide and of the animal foot.

This should be begun early, before the urgent symptoms have developed, if the best results are to be obtained. Hence, when the dog passes blood and mucus, the excrement should be examined for the eggs and larvae. It may, as in man, require several treatments before the worm is totally eradicated from the animal. Treatment.

Our treatment has been directed to killing the worms by the use of thymol, and then expelling their dead bodies and the ova by the use of salts.

The dog is starved from seven in the morning until seven at night, at which time the first dose of thymol is given, in capsule. Two hours later, this dose is repeated, the dog being kept quiet and fasted till next morning, when a dose of salts is given. After the salts has acted, the dog may be fed anything it will eat, preferably milk, beef tea, etc. Sherry wine may be given as a stimulant, in dessert-spoonful doses. The dose of thymol should not be less than 10 grains for puppies and very small dogs, nor more than 30 to 40 grains for older and larger dogs. The dose of salts will range from 1 to 4 drachms, according to size of animal. If the symptoms do not abate in a few days, four or five, repeat the above doses. Repeat, anyway, in ten days.

Should the European war continue much longer, it is probable the supply of thymol will be discontinued, as it is "made in Germany." To provide a substitute for thymol is a problem that is already being considered. This substitute is the time-honored oil of cenopodium, otherwise known as wormseed oil. It is even superior to thymol in several ways. It is less poisonous, and stands highest in the scale of anthelmintics.

The coefficients of several worm destroyers are as follows, according to a government report: Eucalyptus oil, 38; naphthol, 68; thymol, 83; oil of chenopodium surpasses them all, with a coefficient of 91.

The plant from which this oil is obtained grows in great profusion in Florida, and is known under the popular name, Jerusalem oak. The expressed juice from the green leaves of the plant is in high favor amongst the colored "mammies" as a worm medicine.

The dose of the oil of chenopodium ranges from 8 to 16 drops, according to age, for people. The same dosage would apply for dogs. The dose is repeated every two hours for three doses. Two hours thereafter, a tablespoonful of castor oil with a teaspoonful of chloroform is given. The oil is best administered on sugar. If unusual depression occurs from the use of the oil, stop it, and stimulate with strong, hot coffee, given by the mouth, or injected into the rectum.

Another method of applying the remedy is to prepare a decoction by boiling one ounce of the fresh plant in a pint of milk or water, and administering this tea in wineglassful doses.

As the resulting anaemia is pronounced, this deserves notice, and a general tonic should be given. The following tonic pill is recommended. Each pill should contain the following amounts of the ingredients, according to age and size of the dog: Ferri reduct., grains 1 to 5; Strych. sulph., grains 1-100 to 1-60; Quin. sulph., grains 1 to 2; Acid arsenosi, grains, 1-30 to 1-10.

In 1902, the writer was called to Newberry to investigate a cattle disease in range animals. The principal symptoms were intense itching about the head, and excitement, which was increased to such an extent by handling, that it was not deemed wise to run further risk of personal injury. It was believed at the time that acute Texas fever having this unusual symptom was the true diagnosis, and the incident was mentioned in my bulletin on Texas Fever, then in preparation, and later issued from the Florida Experiment Station, then located at Lake City.

Since then, the writer has seen and heard of numerous cases of this mysterious disease, and for want of better informa-

tion, has generally attributed them to other causes, such as hydrophobia, blind staggers, or forage poisoning, lice and mange.

In 1902 Aujeszky, a Hungarian veterinarian, recognized this affection as a distinct and new infectious disease of the lower animals, of wide distribution, and affecting horses and dogs. Since then other observers have studied the disease in cattle, sheep, goats, dogs and cats. The disease is easily produced by inoculation in rabbits, guinea pigs, mice and rats. Swine, pigeons and fowls are immune to the disease. It is, therefore, remarkable, as a disease of wide pathogenesis.

Aujeszky called the disease Infectious Bulbar Paralysis, or Pseudo-rabies. As neither of these names has been considered satisfactory, the name, Disease of Aujeszky, has been applied, in honor of its discoverer. Since very little is known as to the etiology and pathology of the disease, the name, "Mad Itch," denoting its principal symptom, is tentatively adopted by the writer.

The following symptoms are described briefly, as occurring in the farm animals:

In cattle, there is a constant rubbing of the nose, which causes, first, loss of hair and then the skin, and even flesh. The parts become infected, swollen and boggy. The animal moans in great pain, and strikes the ground with the hind legs. Attempts at handling increase the excitement and suffering. Even the presence of people will cause increase of symptoms, with perspiration and champing of the jaws. Interference with digestion causes bloating, and the animal dies in 36 to 48 hours after the onset of the symptoms.

Dogs have loss of appetite, are melancholy, respond slowly, or not at all to the owner's call. He looks at the part of the body where the infection entered, and barks. He is easily frightened and runs away at the approach of man, while he will fight and bite other dogs, but will not harm man. He will bite nearby objects and try to tear them. The expression of the face is painful. There is dribbling of saliva, and the breathing is loud and difficult. Thirst is a prominent symptom, and the dog drinks ravenously, even though in great pain. At the point where the virus has entered the body, there

fter-treatment.

ad Itch in
omestic Animals.

is great itching. The skin is bitten and scratched, and when this has been torn away, the underlying flesh is attacked. Even when the dog is dying from exhaustion he will continue to scratch and tear the flesh. While these symptoms suggest rabies or hydrophobia, the microscopic examination of the brain will not disclose the presence of the Negri bodies, which are always found in certain parts of the brain, in rabid animals.

In horses and mules, the disease also greatly resembles rabies, and blind staggers or forage poisoning. The predominating symptoms are the intense itching and rubbing against objects until the skin and flesh are worn away. Excitement and nervous irritability may not be present, in all cases, but violent itching and often throat paralysis, are present. There can be little doubt that many outbreaks of so-called blind staggers or forage poisoning formerly diagnosed as such in Florida, were, in reality cases of this disease. Likewise, in dogs, where the examination of the brain might fail to reveal the presence of Negri bodies, even though the clinical history pointed to the existence of rabies, we would have to do with this disease.

The following letter recently received from a gentleman living in the southern part of the State, describes this disease, as it occurs in the mild form, in horses and mules:

"A number of people in this vicinity have mules troubled with a disease or infection of the skin that causes them constant worry and annoyance, and allowing very little rest during the night. I personally consulted a veterinarian, but was unable to get any satisfactory information, and many have tried various remedies, only to meet with failure to relieve their suffering animals.

"I have watched the case on my own mule, and find the symptoms about as follows: First appearance is about the face and ears, then the head, generally rubbing the hair off the face until almost bared, also rubs hair off the back and out of the ears. Later I noticed places on the side of the neck, usually near the mane that the hair and skin had been rubbed off by scratching with the hind hoof, causing a raw sore that has always healed without giving any trouble. From the neck the trouble spreads to the back along and near the

spinal column and finally to the tail. I have seen my mule biting the back viciously, tearing the hair and skin out in chunks, apparently. I have also noticed that when working the animals near patches of grass, more particularly maiden cane, they are attacked by a midget fly, that seems to be a sucking insect not more than one thirty-second of an inch in length, which attacks them in great numbers. After these attacks, the mules seem to suffer for several days, rubbing and biting more vigorously at first and less as they seem to become exhausted."

The cause of this disease being unknown, we are at a loss to know how to treat it. It is evidently a disease of the nervous system, akin to rabies, and it may be that the presence of the causative agent will be discovered, as in rabies; hence we may expect that a vaccine will be prepared, although efforts along this line have failed in the past. The cause is attributed by some as being the volatile oils from certain plants, such as poison ivy. The occurrence of the disease in animals that do not eat plants, and the ease with which it is produced, in experimental animals, by inoculation of the blood serum, and the brain matter of infected animals, dispels this idea, and proves conclusively its infectiousness.

To relieve the urgent symptoms, anti-pruritic lotions at once suggest themselves, as do purgatives, assuming the animals may have eaten plants containing irritant poisons having a direct action upon the skin. Hence, the treatment advised by Dr. C. A. Cary, of the Alabama Experiment Station, is here given. He says: "I advise that owners of animals affected with itching disease apply freely and frequently early in its course, one per cent solutions of permanganate of potash or iron sulphate (one per cent in water) solution, two or three times a day. Also give to cattle, horses and mules one to two pounds of Epsom Salts in one to two pints of water to remove from the alimentary canal any of the plants that may have been swallowed. Or use one to two pints of raw linseed oil, olive oil, castor oil or warm lard."

Regulations Governing the Entry of Domestic Animals into Florida, Adopted by the Board, July 28, 1914, and Made Effective September 1, 1914.
Live Stock Importation Regulations.

Regulations governing the entry of Domestic animals into Florida.

SECTION 1. The importation by railroad, boat, in wagon, by express or other common carrier, on hoof or in any other manner, of live stock diseased or exposed to disease into the State of Florida is hereby prohibited; and to determine which fact the following regulations shall be observed by all persons, firms, transportation companies, corporations, express companies and other common carriers, State Veterinarians and all other state officials authorized to inspect and issue certificates of health for live stock.

SEC. 2. Any person, firm or corporation or any common carrier wishing to bring or transport into the State of Florida (1) bulls, work oxen or female cattle over six months old, not intended for immediate slaughter, or (2) horses, mules or asses, or (3) hogs or swine, must procure before shipment a health certificate, in triplicate, from a Veterinary Inspector of the Bureau of Animal Industry of the United States or from the State Veterinarian or an Assistant State Veterinarian of the State of shipment or from a Licensed Veterinarian whose competency, reliability and official character are certified to in writing by the State Health Officer or authorities charged with the control of diseases of domestic animals in the state from which such animals are to be transported or moved. The original of said health certificate and of all other certificates, if any, must be attached to the waybill. A duplicate or counterpart of said health certificate and of all other certificates must be sent by the shipper to the Veterinarian of the State Board of Health of Florida at Jacksonville, Florida, in ample time to reach him not less than two (2) days before the arrival of said animals at the point of destination in the State of Florida. A third counterpart or triplicate of said health certificate and of all other certificates must be sent in like manner and at the same time to the State Veterinarian or other competent official or authority of the state in which shipment originated.

In the case of shipments of bulls, work oxen or female cattle over six months old, not intended for immediate slaughter, all such shipments must also be accompanied by a tuberculin test chart in triplicate, signed by any one of the officers authorized to sign such health certificates, which tuberculin test chart and said health certificate must show that such cattle are

free from tuberculosis and all contagious, infectious and communicable diseases. Said tuberculin test chart must also show that at least three temperatures were taken before the injection of tuberculin, two to three hours apart, and that five temperatures were taken after injection, two hours apart, beginning ten hours after tuberculin was injected.

In the case of horses, mules or asses, said shipment shall also be accompanied by triplicate mallein test charts which test chart and health certificate must show that such horses, mules or asses are free from all contagious infectious and communicable diseases, and the test charts must show (if the subcutaneous method was used) that at least three temperatures, two to three hours apart, were taken before injection, and that five temperatures were taken after injection, two hours apart, beginning ten hours after the mallein was injected. When the ophthalmic method of testing for glanders is employed, the temperature should be taken twice, first at the time of applying the mallein to the eye, and second when the reaction is being judged.

The tuberculin test chart or mallein test chart, as the shipment may require, must be made out and delivered in triplicate, one copy of which shall accompany the corresponding copy of the health certificate and be sent at the same time and to the same persons as above required in respect to the health certificate.

In the case of hogs and swine, the health certificate must show that the swine are free from all contagious, infectious and communicable diseases, and that they have been immunized against hog cholera by the Dorset-McBryde-Niles serum not more than thirty (30) days prior to the shipment. If the hogs or swine have been immunized by the "serum-simultaneous method," the certificate must show that they were so immunized at least 30 days prior to shipment.

SEC. 3. That cars, boats and other vehicles used in the transportation of all live stock into or within the State of Florida shall first be cleaned of all litter, washed and disinfected with a mixture made with not more than one and one-half ($1\frac{1}{2}$) pounds of lime and one-quarter ($\frac{1}{4}$) of a pound

of pure carbolic acid to each gallon of water or liquid cresolis compositus (U.S.P.) six (6) ounces to every gallon of water.

The increasing demand upon the Board for the services of a veterinarian, especially in making inspection of animals for shipment out of the State, has made it necessary to resort to the same methods as are used in other States, to meet this demand. Accordingly, it has become a policy to appoint all known graduate veterinarians, of good standing, as veterinary inspector for the State.

The duties of these men consist in writing bills of health, and making mallein tests of horses and mules that are to be removed to another State, this being now required by most States. The inspectors serve without pay from the State Board of Health, their fees being paid by the owners of the animals inspected. They use the Board's regular shipping blanks, and are certified to the State Veterinarians of the various States as being authorized to certify to shipments. They are not permitted to ship cattle, as the cattle quarantine makes it impractical to utilize their services for that purpose.

The State thus gets the free service of a large force of veterinarians and the public gets prompt and efficient service which permits of the prompt forwarding of their shipments.

For list of these inspectors, see page 193, Organization of the Veterinary Division.

Movement of Animals Into and Out of the State Since the

Adoption of the Foregoing Regulations, September 1, 1914.

Shipments of Certified Live Stock into Florida, September, 1914:

14 horses from Clearmont, Wyoming, to Cocoa, Fla.
1 horse from Kentucky to Jacksonville, Fla.
1 pony from Havana, Cuba, to Key West, Fla.
7 horses, 2 mules from Atlanta, Ga., to Lake City, Fla.
1 cow from Valdosta, Ga., to Fort Lauderdale, Fla.
34 mules, 4 horses from Atlanta, Ga., to Miami, Fla.
3 mules, 25 horses from Chicago, Ill., to Live Oak, Fla.
4 horses from W. Liberty, Ill., to Delray, Fla.
3 horses, 2 cows, from Louisville, Ky., to Orlando, Fla.
3 mules, 3 horses, from Muscatine, Tenn., to Lakeland, Fla.
3 horses, 5 mules from Atlanta, Ga., to Winter Garden, Fla.
2 mules from Kirkwood, Mo., to Vero, Fla.
4 horses from Greeneville, Tenn., to Wauchula, Fla.
1 hog from Baton Rouge, La., to Pensacola, Fla.
2 horses from Shelbyville, Ky., to Leesburg, Fla.

Veterinary
Inspectors.

7 horses from Atlanta, Ga., to Tampa, Fla.

15 horses, 15 mules from Paducah, Ky., to Titusville, Fla.

Total number certified horses shipped into Florida, September....93

Total number certified mules shipped into Florida, September....64

Total number certified cows shipped into Florida, September.... 3

Total number certified swine shipped into Florida, September.... 1

Grand total number certified animals shipped into Florida during September, 1914.....161

Shipment of Certified Live Stock from Florida, September, 1914:

9 horses, 2 mules Tampa, Fla., to Memphis, Tenn.

2 mules Jacksonville, Fla., to Oconto, Nebraska.

40 cattle Jacksonville, Fla., to Columbia, S. C.

44 cattle Jacksonville, Fla., to Columbia, S. C.

40 cattle Jacksonville, Fla., to Columbia, S. C.

40 cattle Jacksonville, Fla., to Columbia, S. C.

34 cattle Jacksonville, Fla., to Columbia, S. C.

Total number certified horses shipped from Florida, September... 9

Total number certified mules shipped from Florida, September.... 4

Total number certified cattle shipped from Florida, September...198

Grand total number certified animals shipped from Florida during September, 1914.....211

Shipments of Certified Live Stock into Florida, October, 1914:

October 3, Atlanta, Ga., to Lake City, Fla.....19 horses 6 mules

October 3, Glasgow, Mont., to Jacksonville.....61 horses

October 4, St. Paul, Neb., to Kissimmee.....10 horses 17 mules

October 4, Paducah, Ky., to Titusville.....15 horses 15 mules

October 8, Grand Island, Neb., to Tampa.....24 horses

October 8, Atlanta, Ga., to Eustis.....23 horses

October 9, Atlanta, Ga., to Palatka.....14 horses 12 mules

October 9, Atlanta, Ga., to St. Augustine.....15 horses 18 mules

October 10, St. Louis, Mo., to Miami..... 3 horses

October 10, St. Louis, Mo., to Miami.....31 cows

October 11, Brookville, Ind., to Narcoossee..... 2 horses

October 12, St. Louis, Mo., to Ft. Lauderdale..... 4 horses

October 12, Pewaukee, Wis., to Delray..... 3 horses

October 13, Atlanta, Ga., to Miami..... 12 mules

October 13, Chicago Ill., to Tampa.....20 horses

October 14, Chicago, Ill., to Lakeland..... 7 horses 13 mules

October 14, Chicago, Ill., to Live Oak.....27 horses

October 14, Porterdale, Ga., to Green Cove Springs
2 bulls

October 14, Wauben, Ga., to Evinston.....2 cattle

October 15, Nedge, Tenn., to Terra Ceia..... 2 mules

October 17, Chicago, Ill., to Live Oak.....17 horses 6 mules

October 18, DeLand, Ill., to Live Oak..... 4 mules

October 18, Crookston, Neb., to Winter Haven....22 horses

October 18, Hillsborough, Kans., to Fellsmere
2 cows 13 horses 9 mules

October 21, Atlanta, Ga., to Lake City.....12 horses 3 mules

October 21, Woodlake, Neb., to Ft. Meade..... 3 horses 1 mule

October 21, Huntington, W. Va., to Huntington...
3 cows

October 22, Huntington, W. Va., to Huntington...	2 horses	
October 23, Huntington, W. Va., to Jacksonville...	1 horse	
October 23, Woodberry Heights, N. J., to Harwood	1 horse	
October 24, Atlanta, Ga., to Ft. Pierce.....	16 horses	12 mules
October 26, Oakdale, Tenn., to Zolfo.....	2 horses	
October 27, Paducah, Ky., to Florida.....	2 horses	3 mules
October 27, Troy, Pa., to Little River.....	2 horses	
October 28, Ludlow, Ky., to Miami.....	1 horse	
October 28, Atlanta, Ga., to Miami.....	2 horses	16 mules
October 29, Havana, Cuba, to Tampa.....	4 horses	
October 30, Atlanta, Ga., to Jacksonville.....	6 horses	19 mules
October 30, Ramsey, Ind., to St. Cloud.....	2 horses	
October 30, Leesburg, Mo., to Lake Worth..	1 cow 1 horse	3 mules
Total: 357 horses; 173 mules; 37 cows; 2 bulls, 2 cattle.....	571	
Total number of shipments.....	40	

Shipments of Certified Live Stock from Florida, October, 1914:

October 13, Branford, Fla., to Charleston, S. C.....	109 cattle
October 20, Jacksonville, Fla., to Columbia, S. C.....	39 cattle
October 21, Tampa, Fla., to Danville, Ky.....	1 horse
October 30, Jacksonville, Fla., to Columbia, S. C.....	40 cattle
October 30, Jacksonville, Fla., to Blythewood, S. C.....	41 cattle
Total: 229 cattle; 1 horse.....	230
Total number of shipments.....	5

Shipments of Certified Live Stock into Florida, November, 1914:

Nov. 1, Carthage, N. Y., to Narcoossee.....	1 bull	
Nov. 1, National Stock Yards, Ill., to Madison.....	18 horses	9 mules
Nov. 3, National Stock Yards, Ill., to Palatka.....	22 horses	1 mule
Nov. 4, Oklahoma City, Okla., to Lake City.....	25 horses	
Nov. 5, Chattanooga, Tenn., to White Springs.....	2 horses	2 mules
Nov. 6, Atlanta, Ga., to Jacksonville.....	6 horses	19 mules
Nov. 6, Evansville, Ind., to Parish.....	3 horses	2 mules
Nov. 6, New Orleans, La., to Wauchula.....	2 horses	
Nov. 6, Atlanta, Ga., to Miami.....	4 horses	20 mules
Nov. 7, New Orleans, La., to Arcadia.....	2 pigs	
Nov. 8, District of Columbia to Punta Gorda.....	1 horse	
Nov. 8, District of Columbia to Baywood.....	2 horses	
Nov. 8, District of Columbia to Baywood	1 bull, 1 cow	
Nov. 8, Atlanta, Ga., to Live Oak.....	20 horses	6 mules
Nov. 10, Belmar, N. J., to Orlando.....	1 horse	
Nov. 10, Atlanta, Ga., to Lake City.....	2 horses	14 mules
Nov. 11, Kansas City, Mo., to Fort Myers.....	4 horses	1 ass
Nov. 12, National Stock Yards, Ill., to Palatka.....	18 horses	4 mules
Nov. 12, Atlanta, Ga., to Palatka.....	8 horses	17 mules
Nov. 13, Atlanta, Ga., to Jacksonville.....	12 horses	
Nov. 14, Atlanta, Ga., to West Palm Beach.....		10 mules
Nov. 17, Mooreland, Okla., to Kissimmee.....		2 mules
Nov. 19, Enid, Okla., to Wauchula.....	6 horses	
Nov. 19, Columbus, Miss., to Arcadia.....		3 mules
Nov. 20, Atlanta, Ga., to Jacksonville.....	6 horses	18 mules
Nov. 21, Easton, Ill., to City Point.....	1 horse	

Nov. 21, Tamaroa, Ill., to Morrilton.....	4 horses	5 mules
Nov. 22, Atlanta, Ga., to Newburn.....	1 horse	
Nov. 24, National Stock Yards, Ill., to Live Oak...		28 mules
Nov. 27, Butler, Mo., to Miami.....	2 swine, 1 cow	2 horses
Nov. 28, Plainview, Neb., to Bradentown.....	3 horses	
Nov. 28, St. Paul, Neb., to Kissimmee.....	23 horses	4 asses
Total: 196 horses; 160 mules; 2 cows; 2 bulls; 5 asses; 4 swine.....	369	
Total number of shipments.....	32	

Shipments of Certified Live Stock from Florida, November, 1914:

Nov. 16, Jacksonville to Selma, Ala.....	1 mule
Nov. 26, Tampa to Washington, Ga.....	1 mule
Total.....	2 mules

Shipments of Certified Live Stock into Florida under Importation Regulations of the State Board of Health, December, 1914:

Dec. 1, Atlanta, Ga., to DeLand.....		11 mules
Dec. 1, Atlanta, Ga., to Bradentown.....	3 horses	
Dec. 1, Altoona, Ala., to Lane Park.....	1 horse	4 mules
Dec. 1, Kansas City, Mo., to Fort Myers, Fla.....		24 mules
Dec. 1, Yukon, Okla., to Nocatee.....	2 horses	
Dec. 1, District of Columbia, to Jupiter.....		1 mule
Dec. 1, Baton Rouge, La., to Live Oak.....	2 swine	
Dec. 2, Dawson, Ga., to Jacksonville.....	5 horses	20 mules
Dec. 3, Atlanta, Ga., to Palatka.....	11 horses	13 mules
Dec. 3, Chicago, Ill., to Bostwick.....	3 horses	
Dec. 5, Kansas City, Mo., to Fellsmere.....	1 horse	2 mules
Dec. 5, Atlanta, Ga., to Jacksonville.....	1 horse	19 mules
Dec. 7, Atlanta, Ga., to Buena Vista.....	1 horse	
Dec. 8, Atlanta, Ga., to Lake City.....	3 horses	18 mules
Dec. 8, Enid, Okla., to Altamonte Springs.....	1 horse	1 mule
Dec. 9, Atlanta, Ga., to Lake City.....	4 horses	16 mules
Dec. 9, Amarillo, Texas, to Orange Center.....	2 horses	
Dec. 9, Atlanta, Ga., to Jacksonville.....	4 horses	6 mules
Dec. 10, Columbia, Tenn., to Orlando.....	1 horse	
Dec. 10, Chattanooga, Tenn., to Arcadia.....		2 mules
Dec. 11, Chattanooga, Tenn., to Lake Worth.....		1 mule
Dec. 12, Atlanta, Ga., to Jacksonville.....	1 horse	
Dec. 14, Springfield, Ohio, to West Palm Beach...	2 horses	
Dec. 15, District of Columbia, to Daytona.....	5 horses	
Dec. 15, Atlanta, Ga., to Miami.....	2 horses	22 mules
Dec. 15, Centralia, Mo., to Lake Worth.....	1 cow	3 horses
Dec. 15, Atlanta, Ga., to Palatka.....	14 horses	9 mules
Dec. 16, Atlanta, Ga., to Daytona.....	1 horse	
Dec. 17, New Orleans, La., to Summerfield.....	2 horses	
Dec. 17, Atlanta, Ga., to Miami.....	9 horses	14 mules
Dec. 18, Indianapolis, Ind., to Fort Myers.....	22 horses	
Dec. 18, Atlanta, Ga., to Fort Myers.....	1 cow	2 mules
Dec. 19, Atlanta, Ga., to Arcadia, Fla.....		4 mules
Dec. 21, Atlanta, Ga., to Fort Myers.....	4 horses	
Dec. 21, Smithland, Ky., to Titusville.....		5 mules
Dec. 21, Henderson, Tenn., to Inverness...2 swine		
Dec. 21, Charleston, S. C., to Tampa.....	3 horses	
Dec. 21, Murfreesboro, Tenn., to Florahome	1 swine	
Dec. 22, St. Louis, Mo., to Umatilla.....	1 horse	2 mules

Dec. 22, National Stock Yards, Ill., to Madison.....	30 mules
Dec. 22, Easton, Md., to Winter Park.....	2 horses
Dec. 24, Abilene, La., to Miami.....	1 horse
Dec. 24, Knoxville, Tenn., to Tampa.....	1 horse
Dec. 25, Sonora, Ky., to Live Oak.....	26 mules
Dec. 27, Oklahoma City, Okla., to Lake City.....	4 horses 25 mules
Dec. 28, Lynn, Ind., to Green Cove Springs.....	1 swine
Dec. 29, Atlanta, Ga., to Lake City.....	5 horses 14 mules
Dec. 30, Atlanta, Ga., to Jacksonville.....	16 mules
Dec. 31, Spring Hill, Tenn., to Dade City.....	3 horses
Dec. 31, Petersburg, Va., to Leesburg.....	1 horse
Dec. 31, Crookston, Neb., to Winter Haven.....	3 horses
Total: Horses 132; Mules, 307; Cows 2; Swine 6.....	447
Total number of shipments.....	52

Shipments of Certified Live Stock from Florida, December, 1914:

Dec. 4, Jacksonville, Fla., to Spartenburg, Ga.....	1 horse
Dec. 21, Jacksonville, Fla., to Savannah, Ga.....	1 horse
Dec. 24, Tampa, Fla., to Charleston, S. C.....	1 horse
Total.....	3 horses

Movement of Certified Animals into and out of the State last Quarter, 1914

Total number of horses brought into State during last quarter of 1914.....	685
Total number of mules brought into State during last quarter of 1914.....	640
Total number of horses shipped out of State during last quarter of 1914.....	4
Total number of mules shipped out of State during last quarter of 1914.....	2
Total number of cattle shipped into State during last quarter of 1914.....	47
Total number of cattle shipped out of State during last quarter of 1914.....	229
Grand total of certified animals, shipped into State during last quarter of 1914, including 5 asses and 10 swine.....	1387
Grand total of certified animals shipped out of State during last quarter of 1914.....	235

FLORIDA LIVE STOCK ESTIMATES FOR FIVE PAST YEARS.

The Bureau of Crop Estimates in co-operation with the Weather Bureau, United States Department of Agriculture, makes the following estimates for the years, 1911, 1912, 1913, 1914 and 1915:

Horses	Number	Value per head
January 1, 1911.....	49,000	\$113.00
January 1, 1912.....	52,000	106.00
January 1, 1913.....	53,000	118.00
January 1, 1914.....	55,000	122.00
January 1, 1915.....	57,000	121.00

Mules	Number	Value per head
January 1, 1911.....	24,000	161.00
January 1, 1912.....	25,000	154.00
January 1, 1913.....	26,000	152.00
January 1, 1914.....	27,000	168.00
January 1, 1915.....	28,000	163.00

Milch Cows	Number	Value per head
January 1, 1911.....	118,000	35.00
January 1, 1912.....	123,000	33.50
January 1, 1913.....	123,000	36.00
January 1, 1914.....	128,000	38.00
January 1, 1915.....	133,000	42.50

Other Cattle	Number	Value per head
January 1, 1911.....	736,000	12.40
January 1, 1912.....	758,000	13.10
January 1, 1913.....	766,000	12.20
January 1, 1914.....	735,000	13.70
January 1, 1915.....	735,000	14.50

Sheep	Number	Value per head
January 1, 1911.....	119,000	1.99
January 1, 1912.....	120,000	2.10
January 1, 1913.....	119,000	2.10
January 1, 1914.....	118,000	1.90
January 1, 1915.....	119,000	2.20

Swine	Number	Value per head
January 1, 1911.....	867,000	4.60
January 1, 1912.....	954,000	5.20
January 1, 1913.....	878,000	5.90
January 1, 1914.....	904,000	6.00
January 1, 1915.....	949,000	6.00

Miami Dairy
Ordinances.
Rules and
Regulations.
Ordinance 157.

An Ordinance Amending Section 5 of "An Ordinance to Provide for the Inspection of Milk, Dairies and Dairy Herds and to License and Regulate the Sale and Disposition of Milk in the City of Miami, Florida, and Providing a Penalty for its Violation.

Be it Ordained by the City Council of the City of Miami, Florida:

SECTION 1. That Section 5 of "An Ordinance to provide for the inspection of milk, dairies and dairy herds and to license and regulate the sale and disposition of milk in the City of Miami, Florida, and providing a penalty for its violation," be amended to read as follows:

SEC. 5. Upon the filing of the application with the Health Officer as provided in Section 2 of this ordinance, said Health Officer or his authorized inspector or Veterinarian, acting under his instructions, shall proceed without unnecessary delay to inspect the dairy and dairy herd of such applicant or the dairy and dairy herd of the person or persons from whom the applicant obtains or is to obtain his milk for sale or distribution within the corporate limits of the City of Miami, and it shall be the duty of the said Health Officer to make or cause to be made under his direction and supervision, examination and inspection not only of each and every animal producing milk for sale or consumption within the corporate limits of the City of Miami belonging to or controlled by the said applicant or the person from whom said applicant obtains or is to obtain his milk, but also of each and every cow, heifer, bull, steer or calf over the age of six months in the dairy or dairy herd of such person or that is maintaining upon the premises upon which is located the dairy or dairy herd of the applicant or of the person or persons from whom the applicant obtains or is to obtain his milk for the purpose of detecting the presence or absence of tuberculosis or any other contagious or infectious disease.

And the applicant shall file with the Health Officer a certificate of tuberculin test, which test shall have been applied by a graduate veterinarian. In the case of new animals entering the dairy herd of the applicant, or the dairy herd of the

person or persons from whom the applicant obtains his milk, the owner shall file with the Health Officer a certificate of tuberculin test from the State Veterinarian of the State in which the cattle originate, or his duly authorized deputy, or a Veterinary Inspector of the Bureau of Animal Industry, United States Department of Agriculture. And such certificate of tuberculin test shall be accepted by the Miami Board of Health as evidence that the necessary tuberculin tests have been applied and that the animals so tested are free from tuberculosis.

SEC. 2. All ordinances or parts of ordinances in conflict herewith be and the same are hereby repealed.

Passed and adopted this 19th day of October, 1914.

An Ordinance to Provide for the Inspection of Milk Dairies and Dairy Herds and to License and Regulate the Sale and Disposition of Milk in the City of Miami, Florida, and Providing a Penalty for its Violation.

Be it Ordained by the City Council of the City of Miami:

SECTION 1. That from and after the passage and approval of this ordinance, no person shall engage in the sale of milk, cream or buttermilk within the City of Miami, without first having obtained a license so to do in the manner hereinafter provided.

SEC. 2. Any person desiring a license to engage in the sale and disposition of milk, as provided in Section 1 hereof, shall first make application therefor in writing to the Health Officer of the City of Miami, which said application shall set forth with reasonable exactness, the name and place of the residence of the applicant, the exact location or place from which the applicant obtains or is to obtain his milk, and if the applicant is not a producer of milk, then the name of the person or persons from whom he obtains or is to obtain his milk for sale or distribution, and if said applicant is a producer of milk, the number of cows in his dairy herd; the said applicant shall further set forth the manner in which the applicant intends to dispose of his milk when licensed according to the provisions of this ordinance and shall be signed by the applicant

and when received by the Health Officer shall be placed on file and the name of the applicant shall be registered in a book of registration kept for such purpose.

SEC. 3. The filing of the application provided for in the next preceding section shall authorize the applicant to engage in the sale or disposition of milk and to continue in the prosecution of that business if he shall, at the time of the filing of the application, be engaged in the business of selling or distributing milk, until the Health Officer takes action thereon and either issues a license to the applicant or refuses so to do.

SEC. 4. Any applicant, or any person from whom such applicant obtains or is to obtain his milk, shall permit the Health Officer of the City of Miami, or his duly authorized inspector or veterinarian to inspect the dairy or dairy herd of such applicant or the dairy and the dairy herd of the person or persons from whom the applicant obtains or is to obtain his milk, together with all appliances and milk vessels used therein, and any refusal upon the part of such applicant or upon the part of the persons from whom such applicant obtains or is to obtain his milk to permit the inspection above referred to shall be deemed as sufficient ground upon which the Health Officer may refuse to issue the license applied for.

SEC. 5. Upon the filing of the application with the Health Officer as provided in Section 2 of this ordinance, said Health Officer or his authorized inspector or Veterinarian acting under his instructions, shall proceed without unnecessary delay to inspect the dairy and dairy herds of such applicant or the dairy and dairy herd of the person or persons from whom the applicant obtains or is to obtain his milk for sale or distribution within the corporate limits of the City of Miami, and it shall be the duty of the Health Officer to make or cause to be made under his direction and supervision, examination and inspection not only of each and every animal producing milk for sale or consumption within the corporate limits of the City of Miami belonging to or controlled by the said applicant or the person from whom said applicant obtains or is to obtain his milk, but also of each and every cow, heifer, bull, steer or calf over the age of six months in the dairy or dairy herd of such person or that is maintained upon the premises upon which is located the

dairy or dairy herd of the applicant or if the person or persons from whom the applicant obtains or is to obtain his milk for the purpose of detecting the presence or absence of tuberculosis or any other contagious or infectious disease, and said Health Officer or his authorized Veterinarian, acting under his direction and supervision in making such inspection and examination is hereby authorized to use what is commonly known as the tuberculin test as a diagnostic agent for the detection of tuberculosis.

SEC. 6. After such examination and inspection of the dairy and dairy herds, as in the next preceding section provided, an authorized agent of the Health Officer of the City of Miami shall tag each animal so examined, which tag shall be of such character as to afford a permanent record of such examination, nor shall such tag be altered, mutilated or removed by any one other than an authorized agent of the Health Department of the City of Miami and the result of the same as regards the presence or absence from any infectious or contagious disease or any other objectionable condition liable to affect the wholesomeness of milk supply shall be reported to the Health Officer, and the inspector shall also state in such report what disposition if any has been made by the applicant or the person or persons from whom the applicant obtains or is to obtain his milk, of the animals which were found to be affected with tuberculosis or any other contagious or infectious disease or any other objectionable condition liable to affect the wholesomeness of milk supply if any there were, and whether or not any animals so affected are used by the applicant or the person or persons from whom the applicant obtains or is to obtain his milk for the purpose of sale or distribution or consumption within the corporate limits of the City of Miami.

SEC. 7. The Health Officer shall thereupon after due consideration of such report judge and determine whether the applicant may be entitled to obtain a license for the sale and distribution of milk within the corporate limits of the City of Miami, which said license shall be numbered and signed by the Health Officer and a record thereof shall be kept in the book of registration provided for Section 2 of this ordinance, and said license shall be valid and effective for the period of one

year from and after date of its issuance and no longer. The dairy herd and all cattle upon the premises shall be tested for tuberculosis once each year. In case reacting animals are found they shall be removed from the herd and the remaining non-reacting animals shall be re-tested within six months after date of first test.

SEC. 8. Each licensee shall cause his name and his place of business and the number of his license to be legibly placed in a conspicuous place on the outside of all wagons or other vehicles used by him in the sale or distribution of milk within the corporate limits of the City of Miami, and all licensees who sell milk from stores or shops shall keep their licenses constantly posted in a conspicuous place upon the wall of the room within which said sale of milk is prosecuted or carried on.

SEC. 9. No persons shall offer or expose for sale or sell or distribute or deliver for the sale or consumption any unclean, impure, unhealthful or unwholesome or adulterated milk, and no person shall keep animals for the production of milk for sale or distribution within the corporate limits of the City of Miami, in or upon premises which are in an unfit or unclean condition from any cause whatever; nor shall any person draw or suffer to be drawn milk from animals which are themselves in an unfit or unclean condition or from animals which are affected with tuberculosis or any other form of disease or any other objectionable condition liable to affect the wholesomeness of the milk supply or from animals which are fed on any other than sound and wholesome food or upon any form of food which is calculated to produce milk which is unhealthy or unwholesome or from animals which are supplied with water which is impure and unwholesome, nor shall any person keep or suffer to be kept any milk or milk product intended for sale or distribution within the City of Miami in unfit or unclean vessels, nor in any unfit or unclean room or building or in any room or building used as a sleeping apartment or for any other purpose incompatible with the proper preservation of the cleanliness, wholesomeness or healthy condition of the milk or milk vessels kept therein, nor must milk be transferred from cans or bottles or other vessels on streets or in any other place than that properly fitted for the handling of milk and all milk thus kept or handled

or produced is hereby declared to be unclean, impure, unhealthy or unwholesome within the meaning of this section, and any milk which is shown by analysis to contain a preservative or any other substance or substances of any character whatever not natural or normal constituents of milk or to have been deprived either wholly or in part of any constituent naturally or normally contained in milk, or which is shown to contain more than 88 per cent of water fluids or less than 12 per cent of milk solids of which not less than $3\frac{1}{2}$ per cent shall be fat, is hereby declared to be adulterated within the meaning of this section, and any such unclean, impure, unhealthy, unwholesome or adulterated milk may be seized and confiscated by the Health Officer or his duly appointed inspector.

SEC. 10. No cream which is adulterated or that shall contain less than 20 per cent of the fat shall be brought into the City of Miami or held, kept or sold or offered for sale in said City, nor shall any one keep or offer for sale in said City, any such cream. The term "cream" means the fatty portions of pure milk which rise to the surface when milk is left at rest or which are separated by other means. The term "cream" which is adulterated, as used in this section means any cream to which any foreign substance has been added.

SEC. 11. No person shall, within the corporate limits of the City of Miami, have in his possession with intent to sell, offer or expose for sale or sell or deliver for sale or consumption in any store or place of business or from any wagon or other vehicle used in the distribution or sale of milk, any milk from which the cream has been removed or milk commonly known as skimmed milk, without first marking the can or package containing said milk, and from which said milk is delivered to the purchaser or customer with the words "skimmed milk" in large plain letters, each letter being at least one inch high and one-half inch wide and to be placed in such position as to be easily seen when such milk is sold or delivered.

SEC. 12. In order to carry out the provisions and purposes of this ordinance, the Health Officer, his inspectors, veterinarian or other employee acting under his direction and

supervision shall have the right at any and all times to enter upon or in the premises of any person licensed under the provision of this ordinance to examine and inspect the dairy and dairy herd of such licensee or to stop and inspect or cause to be inspected any wagon or other vehicle used in delivering milk, or any store, depot, shop, creamery or any place where milk is offered for sale or sold, and to appropriate a reasonable amount of any milk or milk product in the possession or in the control of such licensee for the purpose of use as samples and for inspection or test; and they shall also have the right to enter upon or into the premises of any person or persons from which such licensee obtains his milk for sale to inspect and examine the dairy and dairy herd of such person or persons and each licensee under the terms hereof shall give notice in writing to the Health Officer of any intention on his part to obtain his milk from any other persons than those named in the original application, and any failure on his part so to do or any refusal on the part of said licensee or on the part of said person or persons from whom said licensee obtains his milk to allow such entry or inspection as may be required under the terms of this ordinance shall follow an immediate revocation of the license of such person or persons by the Health Officer.

SEC. 13. It shall be the duty of the Health Officer to cause the dairy or dairy herd of all licensees hereunder and the dairies and dairy herds of the person or persons from whom such licensees obtain their milk to be inspected from time to time and if the conditions which are required as prerequisite to obtaining a license under the provisions of this ordinance are not constantly maintained, then it shall be the duty of the Health Officer to immediately revoke such license. It is hereby made the duty of the Health Officer to enforce the provisions hereof.

SEC. 14. Any person violating any of the provisions of this ordinance shall, upon conviction thereof, be punished by a fine of not less than \$25.00 nor more than \$100.00 or by imprisonment for not less than ten nor more than ninety days, or both, and by the revocation of any license which may have been granted to such persons under the terms of this ordinance,

such revocation to be immediately made by the Health Officer of the City of Miami.

SEC. 15. The Board of Health of the City of Miami shall have authority under this ordinance to make or cause to be made, rules and regulations not set forth in this ordinance, for the proper production, handling and disposition of milk offered for sale within the City of Miami.

SEC. 16. All ordinances or parts of ordinances inconsistent herewith are hereby repealed.

SEC. 17. This ordinance shall take effect and be in force from and after its final passage, approved by the Mayor and publication in a newspaper as required by the law.

Passed and adopted this 7th day of May, 1914.

Rules and Regulations for the Production and Handling of Milk for Sale and Distribution Within the City of Miami.

Production and Handling of Milk in Miami.

1. The herd shall be examined frequently by the Veterinarian of the Board of Health.

Cows.

2. New animals shall not be admitted to the herd without first having passed a satisfactory tuberculin test, which test shall be applied by the Veterinarian of the Board of Health.

3. Any animals found to be suffering with any contagious, infectious or communicable disease or any objectional condition, Mammitis, or Garget, Gastro-Enteritis, Diarrhoea, Puerperal Sepsis, Septic Metritis, Leucorrhoea, Diffuse Phlegmon, Suppurative Wounds or Ulcerations or from any Septic or Febrile condition shall be removed from the herd and their milk excluded.

4. Cows which are within fifteen days of calving shall be excluded from the dairy herd and milk from such cows shall be excluded for said period and until five days after calving.

5. Cows must not at any time be subject to abuse of any kind.

6. Cows shall not be fed any strongly flavored foods.

7. Salt shall be accessible at all times.

8. Cows shall be supplied with an abundance of pure, fresh drinking water.

1. Stables, barns and milking sheds should have a well-drained location and be free from contaminating surroundings and so constructed as to be easily kept clean.

2. Floors should be tight, sound and incapable of absorbing moisture to any appreciable extent (concrete construction being preferable) and provided with a gutter behind the cows large enough to hold the droppings.

3. Stables, barns and milking sheds shall be provided with stanchions.

4. Feed mangers or troughs shall be of simple construction, smooth and tight so as to be easily cleaned and kept in a sanitary condition. A concrete trough with rounded seams or a smooth floor is best.

5. Barnyards, feeding lots, corrals and pastures to which cows have access shall be free from swamps or stagnant pools and they shall be well-drained and free from contaminating surroundings.

6. No animal other than those used for milk production shall have access to or be kept in stables, barns, milking sheds, barnyards, feeding lots or corrals.

1. A milk room or dairy building shall be provided which shall be located at a reasonable distance and isolated from the stable, barn or milking shed or dwelling and there shall be no hog pen, privy or manure pile within 300 feet of it.

2. The milk room or dairy building shall be equipped with facilities for the proper handling, bottling or storing of milk and the cleaning and storing of utensils and bottles or other containers. And it shall be used for no other purpose than the straining, cooling, handling, bottling and storing of milk and the cleaning of bottles and other containers and the cleaning and storing of utensils. (If possible the handling of milk and the cleaning and storing of utensils shall be done in separate rooms.) It shall be well lighted and ventilated and well screened and have smooth, tight and well drained floors. The walls and ceilings shall be smooth and tight.

1. Utensils should be made of tin with as few seams as possible. Unavoidable seams should be flushed smooth with

Stables, Barns,
Milking Sheds,
Barnyards,
Feeding Lots,
Corrals and
Pastures.

Milk Room or
Dairy Building.

Utensils.

solder. Rusty or battered utensils should not be used. Wire gauze strainers nor strainers which are hard to clean should not be used. A double layer of finely meshed cheese cloth or muslin should be used for straining the milk and several should be supplied for each milking.

2. Small top milk pails or milk pails so constructed as to prevent dirt from falling into the pail while milking should be used. What is known as the "Trueman Covered Milk Pail" is one of the simplest and best covered of pails.

1. Barns, stables or milking sheds should be kept clean. The floors should be frequently swept or washed and gutters kept free from manure. The ceilings, if the buildings are ceiled, and sidewalls and joints, brackets, braces, tops of stanchions, partitions and ledges should be kept free from dust and cobwebs. Feed mangers or troughs should be sweet and clean and free from dirt and fermenting food. Buildings should be whitewashed twice each year. Methods.

2. Barnyards, feeding lots or corrals should be well drained and kept clean and dry. Manure must be removed at least once daily. If stored it must be at a distance of three hundred feet from the buildings. Where conditions will permit, it should be removed and scattered over the ground or stored in a covered pit.

3. The ideal method is to groom each cow before milking and to wash and dry the udder. Where this cannot be done economically, all visible particles of dirt, mud or manure and all dust shall be removed from the back, sides, tail and udder by brushing, and the udder and sides shall be wiped with a clean, damp cloth before milking. Long hair shall be removed from the region of the udder.

4. Cows shall not be fed dry, dusty hay or fodder just before milking.

5. Cows at the time of milking shall be placed in stanchions.

6. Methods of milking shall be cleanly. Milkers shall wash their hands before milking and shall milk with clean, dry hands.

7. Rubbing the sides and udder of a cow after the milker sits down to milk must be avoided.

8. Moistening the hands with milk is forbidden.

9. The first three or four streams of milk shall not enter the pail but be milked into a separate receptacle and such milk shall not enter into the general supply.

10. Milking shall be done in a quiet, quick, clean and thorough manner.

11. Commence milking at the same hour, morning and evening, and milk the cows in the same order.

12. Milkers and other employees shall wear clean outer garments, which shall be worn at no other time than while milking or handling milk, and they shall be kept in a clean place when not in use.

13. Milkers shall not smoke nor chew tobacco nor use tobacco in any form nor use intoxicating liquors while milking or handling milk.

14. Employees shall keep their fingers away from their nose and mouth and other parts of the body during milking time and no milker shall permit his hands, fingers, lips or tongue to come in contact with milk intended for sale.

15. Milk when drawn shall be immediately removed from the stable or milking shed to the milk room or dairy building and immediately strained and cooled to a temperature of 50 degrees Fahrenheit, or less; at which temperature it should be kept until delivered.

16. Milk which is bloody, ropy, stringy or unnatural in appearance or odor shall be excluded from supply.

17. After milk has been strained and cooled it should be put in bottles or other containers and covered and from which it should not be removed until delivered.

18. All utensils, bottles and other containers shall be thoroughly cleaned by first rinsing in clean cold water, washed in hot soap or soda solution followed by rinsing in clean, cold water, followed by pouring boiling water over them, or preferably, sterilized with live steam after which they shall be inverted on racks in the milk room.

No person having an inflamed throat or suffering with any infectious or contagious disease, or who is known to be a

Health of
Employees.

typhoid carrier, shall be admitted to the stable or dairy building or be allowed to handle the milk, the milk utensils, or any object that directly or indirectly comes in contact with the milk.

No person who has been exposed at home or elsewhere within thirty days to any infectious or contagious disease shall be allowed in the stable or dairy building or to handle the milk etc., until a physician certifies that it is safe for him to do so.

REPORT OF DR. W. A. MUNSELL,

ASSISTANT VETERINARIAN.

Jacksonville, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I herewith submit a summary report of my work as Assistant Veterinarian for the year 1914, which includes an article on Infectious Anemia or Swamp Fever in Horses and Mules. During the year I have been detailed 76 times upon cases as follows:

Investigation for glanders.....	18 times
Certifying cattle for interstate shipment.....	16 times
Demonstrate serum treatment for hog cholera.....	11 times
Vat construction and dipping.....	15 times
Special and miscellaneous cases.....	16 times

as shown in tabulated form, together with more or less consultory correspondence on various subjects pertaining to the department work.

Respectfully submitted,

W. A. MUNSELL,

Assistant Veterinarian.

DATA ON GLANDERS CASES

Date	Place	Owner	Number & Animal	Diagnosis	Disposition
Jan. 2	Brownsville	Z. Russ	1 Mule	Pos. Clin.	Condemned
Feb. 9	Jacksonville	Sable Bros.	1 Horse	Pos. Clin.	Condemned
Feb. 10	Jacksonville	Parish Johnson	1 Horse	Neg. Test	
Feb. 11	Starke	H. S. Norman	1 Horse		Dead
Feb. 19	Orlando	J. P. Mathers	2 Mules	Tested	1 Condemned
Feb. 22	Tampa	Am. Laundry Co.	8 Horses	Tested	2 Condemned
Feb. 24	Orlando	W. M. Madrid	1 Horse	Clinical	Condemned
April 3	Glen St. Mary	Jas. Johnson	1 Horse	Neg.	
April 11	Newberry	E. C. Sapp	1 Horse	Neg.	
April 15	Tampa	J. P. Brown	14 Horses	Tested	4 Condemned
June 3	Dade City	Eli Vaughn	1 Horse		Dead
July 15	Sanford	B. I. Leonardy	1 Mule	Clinical	Condemned
Aug. 6	DeLeon Spgs.	Roy Corbett	1 Horse		Dead
Aug. 25	Newberry	Wm. Mears	1 Horse	Neg.	
Sept. 23	Palatka	B. I. Leonardy	1 Horse	Clinical	Condemned
Oct. 3	Old Town	W. B. Finlayson	1 Mule	Neg.	
Oct. 20	Dade City	O. L. Dayton	1 Horse	Neg.	
Dec. 4	Hastings	Dr. Dolan	1 Horse		Dead

CATTLE CERTIFIED FOR INTERSTATE SHIPMENT

Date	Place	No.	Shipper	Consignee	Destination
April 6	Gainesville	1	N. A. Callison	S. M. Davis	Fayetteville, N. C.
May 4-6	Kissimmee	533	Rull Bass	McKibben Bros.	Iantha, Mo.
May 11-12	Kissimmee	469	Henry Bass	Roeliff Chenoveth	Clarkeberg, W. Va.
June 18	Jacksonville	80	Union Stk. Yds.	W. B. King	DePerre, Wis.
June 20	Jacksonville	75	Union Stk. Yds.	Gibson & Bell	Louisville, Ky.
July 8-9	Hastings	240	F. E. Bugbee	Shippey & White	Atlanta, Ga.
July 10	Hastings	57	J. W. White	W. H. Hodges	New Orleans, La.
July 14	Jacksonville	45	Union Stk. Yds.	Wm. Dougherty	Louisville, Ky.
July 29	Jacksonville	35	Union Stk. Yds.		Columbia, S. C.
Aug. 5	Gainesville	1	N. A. Callison	M. Dixon	Ogierfield, Ga.
Aug. 31	Jacksonville	38	Union Stk. Yds.	C. T. Goodwyn	Columbia, S. C.
Sept. 5	Jacksonville	40	Union Stk. Yds.	J. T. Bland	Columbia, S. C.
Sept. 17	Jacksonville	40	Union Stk. Yds.	J. T. Bland	Columbia, S. C.
Sept. 22	Jacksonville	40	Union Stk. Yds.	J. T. Bland	Columbia, S. C.
Sept. 24	Jacksonville	40	Union Stk. Yds.	J. T. Bland	Columbia, S. C.
Oct. 13	Branford	109	W. E. Brazeal	W. L. Nelson	Charleston, S. C.

DETAIL OF WORK ON HOG CHOLERA

Date	Place	Owner	No. Treated	Amt. Serum Used	Method of Treatment	Agent Appointed
Jan. 7	Gainesville	B. F. Williamson	12	500 cc	Double	
Jan. 10	Kissimmee	J. E. Lupper	25	500 cc	Single	J. E. Lupper
Mar. 4	Leesburg	J. W. Hopson	35	1250 cc	Single	J. W. Hopson
Sept. 7	Ocala	Marion Co. Farm	89	3000 cc	Single	Dr. Dunn
Oct. 3	Old Town	G. C. Chairs	50	2000 cc	Single	
Oct. 14	Live Oak	F. Drew	25	1000 cc	Double	
Nov. 6	Oxford	Gamble Bros.	65	3000 cc	Double	
Dec. 15	Lawtey	J. W. Caldwell	12	250 cc	Double	
Dec. 28	Worthington Spgs.	L. G. Ware	15	500 cc	Double	Z. Mizell
Dec. 29-31	Fort Myers	C. E. Barton	15	500 cc	Double	Dr. H. A. Smith
Dec. 29-31	Fort Myers	Peter Schatt	15	500 cc	Single	Woodrow, Fla.

TICK ERADICATION AND VAT CONSTRUCTION

Date	Place	Owner	Object Demonstrated
Apr. 27	Emporia	L. P. Felt	Prepare dip. sol. and dipping
Apr. 29	Jacksonville	Union Stock Yds.	Prepare dip. sol. and dipping
May 2	Kissimmee	Rull Bass	Prepare dip. sol. and dipped
May 23	Jacksonville	Union Stock Yds.	Prepare dip. sol. and dipped
May 26	Jacksonville	Union Stock Yds.	Dipping for shipment
June 16	Jacksonville	Union Stock Yds.	Dipping for shipment
July 3	Hastings	F. E. Bugbee	Prepared Sol. and dipped for shipment
Aug. 11	Pierson	Harper & Minshew	Vat Construction
Aug. 17	Rodman	Rodman Lbr. Co.	Vat Construction
Aug. 18	Pierson	Harper & Minshew	Prepared dipping solution
Aug. 19	Highland	F. D. Long	Vat Construction
Aug. 28	Jacksonville	Union Stock Yds.	Prepared dip. sol. and tested
Sep. 4	Jacksonville	Union Stock Yds.	Prepared dip. sol. and tested
Sep. 19	Highland	F. D. Long	Prepared dip. sol. and tested
Oct. 6	Zolfo	Roberts & Wadsworth	Vat Construction

SPECIAL CASES

Date	Place	Owner	Sub. Investigated	Diagnosis
Jan. 5	Cocoa	R. W. Lewis	Requirement for shipping to Pa.	
Mar. 6	Mattox	I. S. Morgan	Sick dairy cows	Tick fever
Mar. 10	Gainesville		Certify horse for shipping to N. C.	
Mar. 25	Boynton	Boynton Hotel	Tuberculosis test dairy, three cows	Negative
Apr. 6	Ocala	Ocala Stk. Farm	Sick calves	Tick fever
June 12	Dukes		Sick cows	Tick fever
June 22-24	Daytona	Board of Trade	Inspect dairies supplying milk	
July 25	Palatka	Tom Waldron	Sick hogs	Lung worm and cholera
Aug. 4	Gainesville	N. A. Callison	Tuberculin test calf for shipment to Ga.	Negative
Sep. 2	Hawthorn	W. S. Moore	Tuberculin test family cow	Negative
Sep. 4	Palatka	F. J. Fearnside	Sick hogs	Cholera
Sep. 23-27	Key West	V. Cordero	Inspect and certify imported horse from Cuba	
Oct. 2	Kissimmee	Dr. Richmond	Sick cow	Admitted Tick fever and indigestion
Oct. 15	Live Oak	F. Drew	Sick pigs	Food poison
Nov. 12	Ocala	J. Robinson	Sick hogs	Cholera
Dec. 24	Fort White		Sick cattle	Forage poison

Infectious Anemia, or Swamp Fever in Horses and Mules

Infectious anemia, otherwise known as Swamp Fever, Staggers, Kidney Disease, Sanded and Surra, is an infectious disease of horses and mules which occurs not only in Florida, but in many other, possibly all States of the Union. It is characterized by a progressive, pernicious anemia, with marked emaciation and weakness, and by frequent urination and intermittent fever. It not only prevails in low, marshy lands, but also in high lands which abound in ponds and marshes. It makes its appearance during wet seasons, and occurs in three forms, the acute, subacute and chronic. It can be transmitted experimentally from sick to healthy animals by the subcutaneous inoculation of blood serum that has been filtered through the finest filters, which proves it to be caused by a virus that is not visible under the highest-powered microscope, and that the virus belongs to the same class as those causing hog cholera, and foot and mouth disease.

The natural mode of infection is, no doubt, through the digestive tract, from infected drinking water, pastures or feed-lots. It is also probable that the virus may be spread by flies and other biting insects.

In uncomplicated cases the disease runs a chronic course, lasting from two months to a year, during which time the animal emaciates greatly and seems to die of starvation, although the appetite remains good, and the best of food is supplied.

These begin with a dull, listless appearance, lack of ambition and general weakness, particularly in the hind parts, which manifests itself by a staggering gait. The animal easily tires, and there is increased respiration upon the slightest exertion. The pulse is increased, weak, irregular and intermittent. The temperature may rise to 105, and remain there for several days, drop again, and rise again, at irregular intervals. This characteristic fever may be overlooked by the owner, or even the veterinarian, under the circumstances surrounding practice in rural districts. At times when the fever is absent, the animal has a voracious appetite, and seems to be recovering. A relapse soon occurs, however, prominent symptoms which impress themselves upon the owner are, frequent urination, thirst, stocking of the legs, sheath, belly and lower lips. The conjunctival membranes and haw are pale, sometimes of a yellowish tinge, and may show enlargement of the blood vessels. The mucous membranes of the mouth and nose are pale yellow. Microscopic examination of the blood will reveal a great diminution in the number of red cells, as indicated also by an unusually small blood clot which forms in the blood, drawn. There is a more or less constant mucous discharge from the eyes, which runs down the face, and the eyes have a sunken appearance.

This is easily made from the general symptoms such as, the insidious onset, remittent fever, progressive emaciation and anemia, the unimpaired and even ravenous appetite, the staggering, uncertain gait, the general weakness, frequent urination and more or less tenderness in the region of the loins and the stages of apparent improvement, and relapse. These make up a train of symptoms which are not present in other infectious diseases in horses and mules, and when viewed as a whole, the diagnosis is not difficult.

Only results may be expected from treatment when the case is seen early and prompt treatment is instituted and applied

persistently. Generally, treatment has not been satisfactory. The arsenic, quinine, iron and silver preparations have been tried, with varying success. As in the case of all other infectious diseases, the healthy animals should be separated from the sick ones and the premises should be thoroughly disinfected with a 5 to 8 per cent. solution of any of the coal-tar preparations, or with a five per cent. solution of carbolic acid. Change of pasture is highly advisable, as well as a change of drinking water.

The Bureau of Animal Industry advises the following arsenical tonic:

Arsenious acid, two grams; powdered nux vomica, twenty-eight grams; powdered cinchona bark, eighty-five grams; powdered gentian root, one hundred grams. Mix these and give half a tablespoonful at each feeding of the animal.

REPORT OF DR. J. W. DE MILLY,

ASSISTANT VETERINARIAN.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—Please find enclosed my report of service during year 1914, subject to your approval for the annual report of the State Board of Health.

Yours very truly,

J. W. DEMILLY,

Assistant Veterinarian.

On April 1st, left Tallahassee for Marianna to investigate supposed case of glanders for Mr. A. E. Michner, Lenath Lenard Agt. The ophthalmic mallein test was applied on the afternoon of April 1st and the result of the test observed on the morning of April 2nd was negative.

On April 3rd, inoculated for Mickler & Perkins 37 hogs, using 880 cc of serum.

In addition to the above report, during the month of April 1st collected and forwarded to the office, cattle ticks for experimental work.

On May 5th, was detailed to Gainesville to confer with Mr. Stafford Burgis regarding hog cholera. Demonstrated our method of administering hog cholera serum by inoculating at Archer, May 7th, 17 hogs for Mr. C. E. Pearson, using 410 cc of serum; also 10 hogs for Mr. John Acres, using 260 cc of serum.

From Gainesville was detailed to Leesburg to confer with Mr. W. R. Newell, in regard to hog cholera. May 8th, I inoculated his herd of 56 hogs, using 1485 cc of serum. I also instructed Mr. Newell and appointed him agent for his immediate neighborhood.

From Leesburg, I returned to Jacksonville and from there went to Macclenny to confer with Mr. C. F. Barber regarding vat construction.

May 14, applied the ophthalmic mallein test to one horse, property of Judge J. B. Whitfield, of Tallahassee. Result on May 15, negative.

During the month of May, I caught and forwarded to the office a number of buzzards for hog cholera experimental work; also met with the City Council of Tallahassee regarding the passage of a city ordinance regulating the care of manure on premises to curtail the breeding places of flies.

On May 27, there was held at Tallahassee a barbecue, on which occasion I was instrumental in getting Dr. C. F. Dawson to deliver an address (illustrated) on tick eradication.

June 1st, visited the vicinity of Chaires. Inoculated the herd of hogs belonging to Mr. J. W. Dutton, instructed and appointed him agent for that territory.

June 11th, was detailed to Ona to supervise construction of vat for Mr. R. L. Cowart. While there, conferred with Mr. Joseph Crews regarding construction of other vats in that section. Returned to Tallahassee June 17.

June 30, was called to Jacksonville to see a galvanized iron vat built by the E. O. Painter Co. and to confer with Dr. Dawson regarding installation of same.

July 5 to 7, inclusive, was at Marianna, applying the tuberculin test to the herd of cattle belonging to the Florida State Industrial School. Offered some suggestions as to the milking and care of milk.

July 15th, was detailed to Rodman to install galvanized iron vat for the Rodman Lumber Co. Same not being satisfactory, I returned to Rodman, July 28th, to supervise construction of concrete vat. Concrete work was completed August 3rd. (July 27, inoculated herd of 30 hogs, using 760 cc of serum, for Mr. E. M. Russell, Tallahassee.)

August 15 was detailed to Wauchula to construct vat for Mr. Jos. Crews. Concrete work was finished August 20th.

On September 1st, was detailed to Highland to construct vat for Mr. F. D. Land. Concrete work was completed September 4th.

On September 8, was detailed to Greenville to investigate supposed case of glanders. Result, negative.

September 13 was detailed to Macclenny to construct vat for Mr. C. F. Barber. Concrete work was completed September 17.

September 29, was detailed to Branford to supervise shipment of cattle. Owner not willing to ship according to my instructions from the office, so returned to Tallahassee October 1st.

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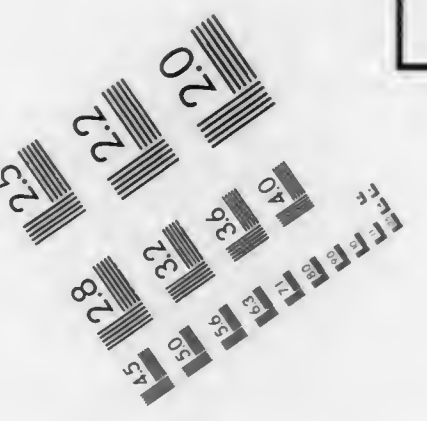
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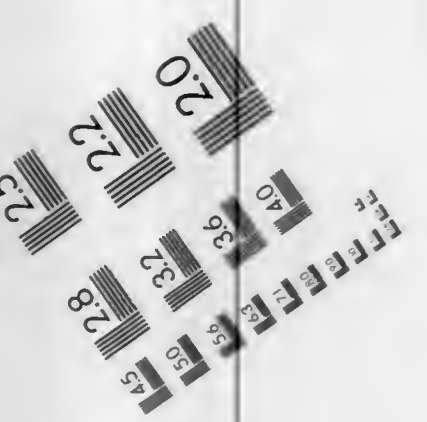
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